

No. 891,353.

PATENTED JUNE 23, 1908.

R. E. MEYER.
METALLIC SEALING CAP.

APPLICATION FILED JULY 16, 1906. RENEWED OCT. 9, 1907.

Fig. 1

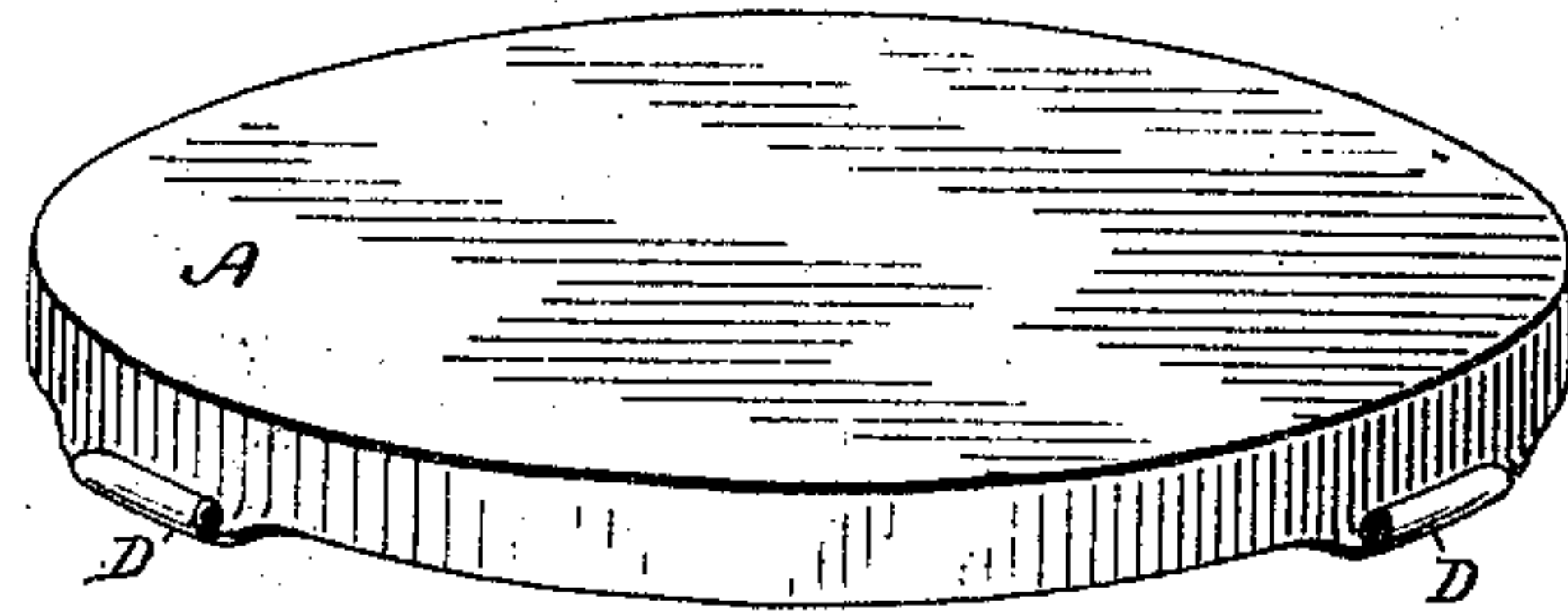


Fig. 2.

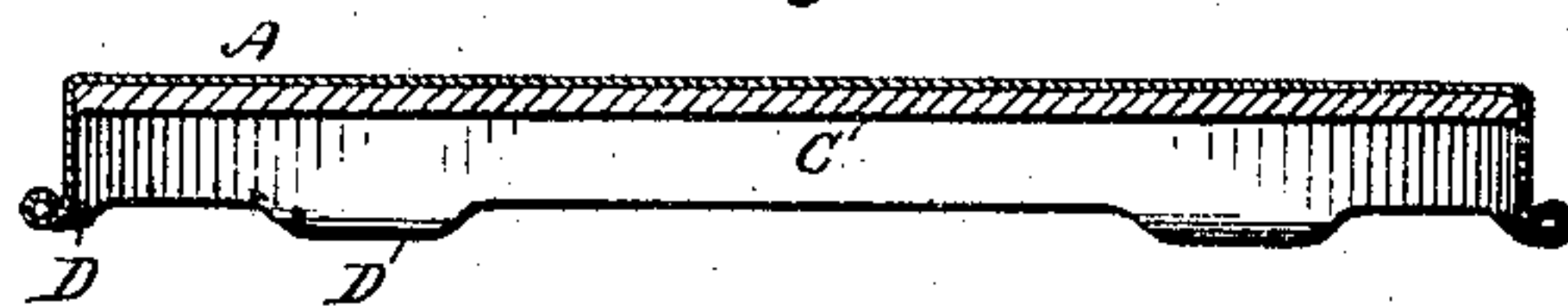


Fig. 3.

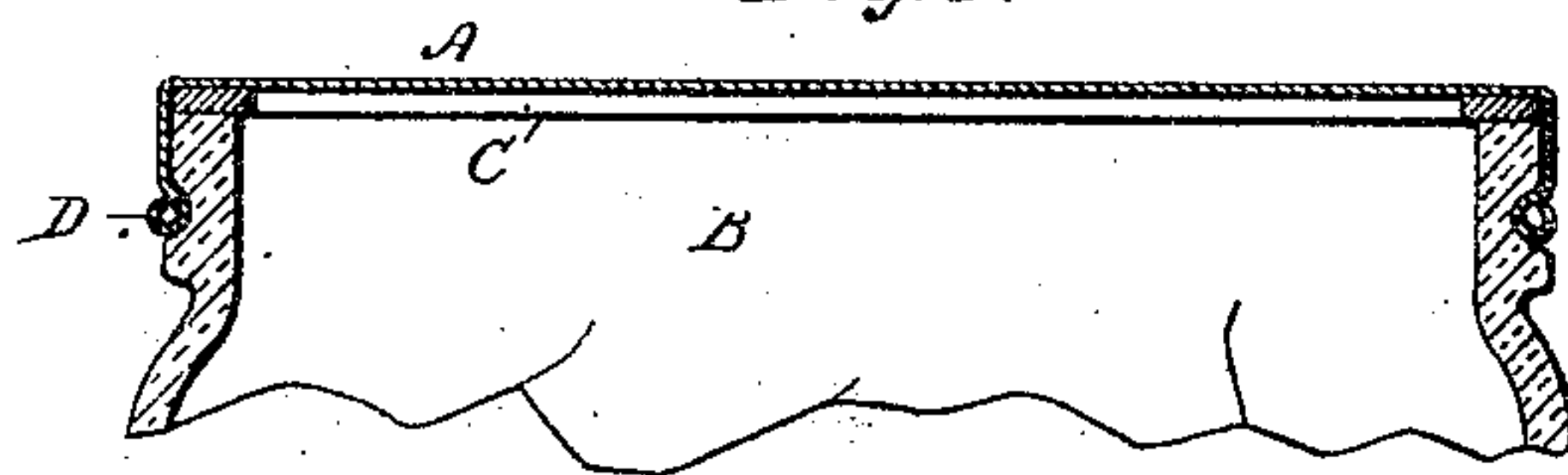


Fig. 4.

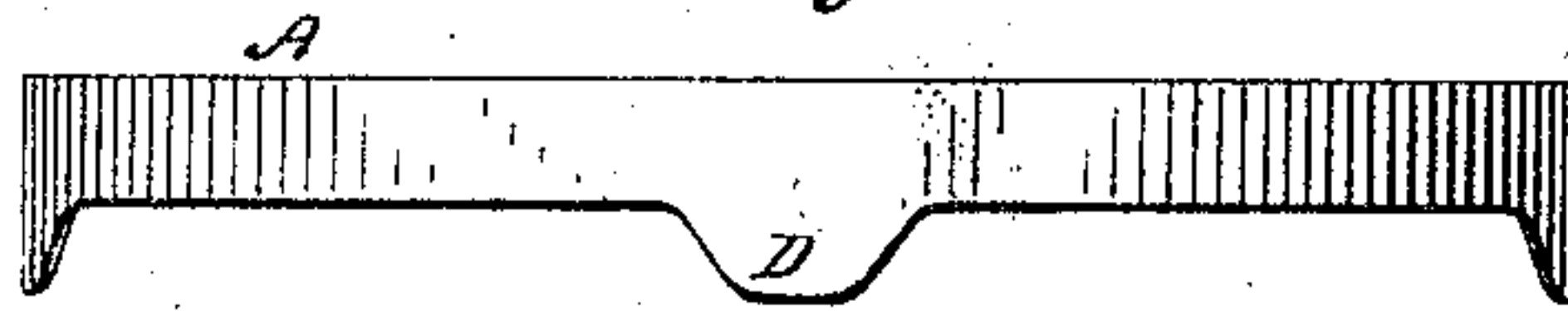


Fig. 5

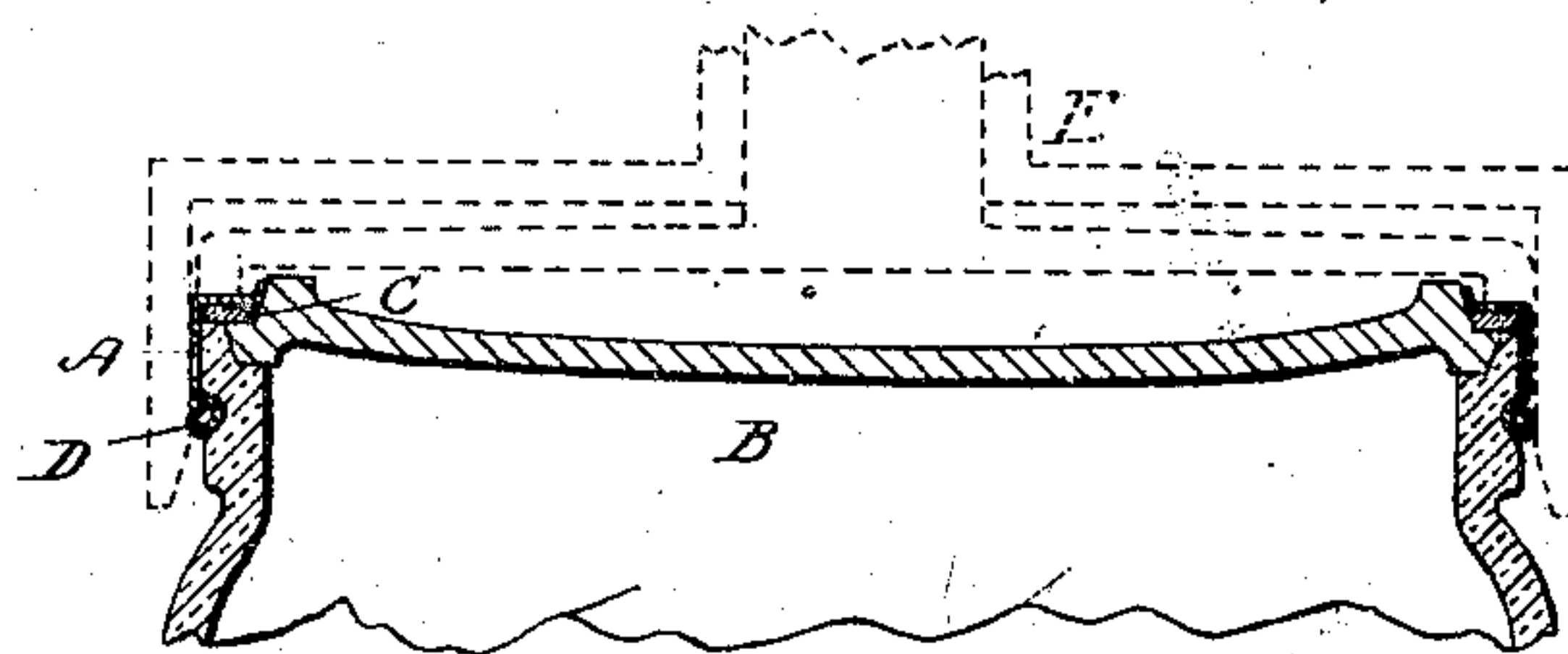
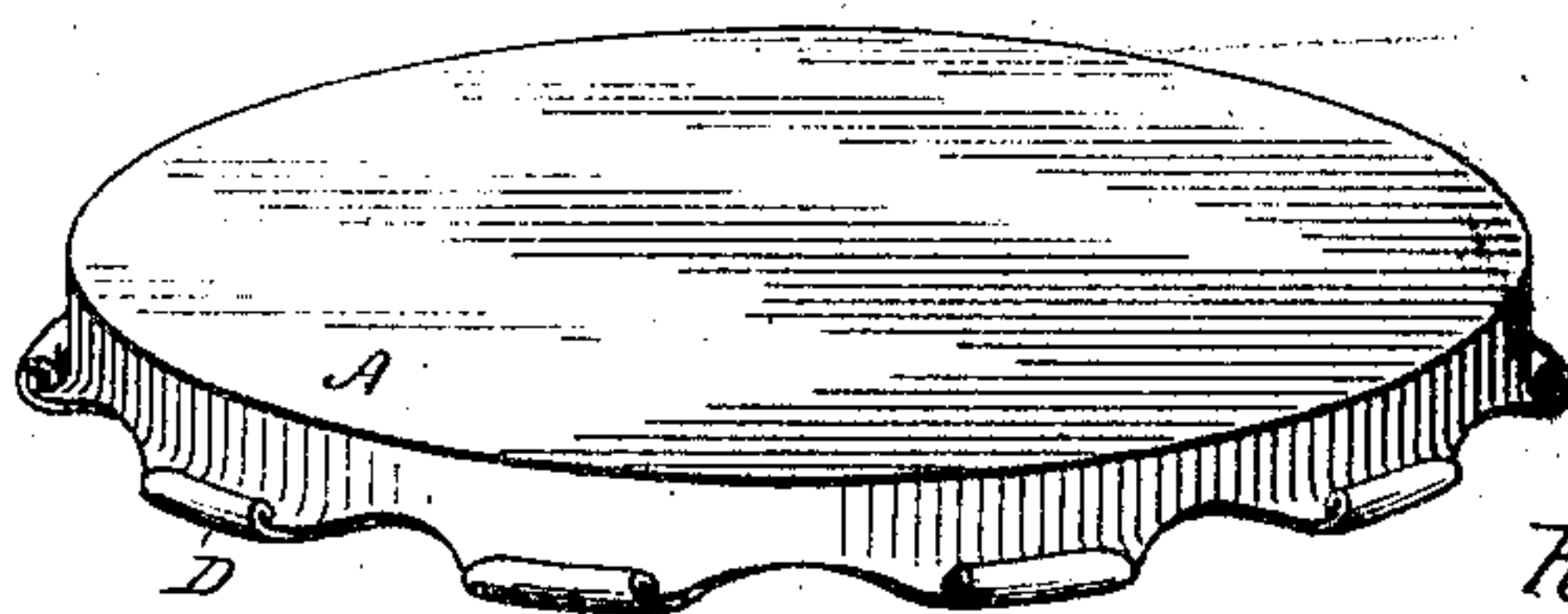


Fig. 6



WITNESSES:

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BY

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RICHARD E. MEYER, OF DETROIT, MICHIGAN.

METALLIC SEALING-CAP.

No. 891,353.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed July 16, 1906, Serial No. 326,467. Renewed October 9, 1907. Serial No. 396,663.

To all whom it may concern:

Be it known that I, RICHARD E. MEYER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Metallic Sealing-Caps, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to the art of hermetically sealing jars, bottles and the like with metallic caps and it has particular reference to a cap made from sheet metal and used in connection with a sealing disk or gasket and the invention consists in the novel means with which the cap is provided for clamping it to the mouth of the jar or bottle, all as more fully hereinafter described and shown in the accompanying drawings, in which

Figure 1, is a perspective view of my improved metallic sealing cap; Fig. 2, is a vertical cross section thereof; Fig. 3, is a similar section showing it as applied to a jar; Fig. 4, is a side elevation of the cap with the fingers wholly unrolled; Fig. 5, is a vertical central section through a metallic cap of my invention showing the operation of sealing therewith, the cap in this instance having an open top as used in connection with other known forms of jar closures in which glass covers are used; and Fig. 6, is a perspective view of a slightly modified form of cap.

A is the cap, B is a jar to which it is applied and C is the sealing medium interposed between the jar and the cap, all of known construction and operation except as more fully hereinafter described.

The cap differs from other metallic caps in present use only in the means for clamping it to the shoulder of a jar and this in the present invention consists of a plurality of clamping fingers D which are rolled portions on the edge of the depending flange of the cap and are formed from suitable extensions of said flange, coiled or rolled up against the outer face of the flange and preferably conforming to the shape thereof. These fingers will be preferably formed at the lower edge of a continuous portion of the depending flange as shown in Fig. 4, but it will be understood that there is considerable latitude, as there is also in the number of the fingers, their size relative to the cap and in the shape of the extensions from which the rolls are formed.

Metallic caps of the above described con-

struction present several advantages, in the first instance they are as cheaply manufactured as any other cap, since the rolling of the clamping fingers is a very simple operation, another advantage is the facility with which the cap may be applied in sealing. All that will be needed is to seat the cap firmly upon the jar and when it is thus seated to force the clamping fingers into engagement with the jar, as for instance by the use of a pressure head as E in Fig. 5, which in its upper portion fits the cap but gradually enlarges towards the lower end. In pressing this head downwardly over the cap the clamping fingers will be pressed inwardly and downwardly. This pressure forces them down bodily till they reach the locking shoulder of the jar and thence they will be pressed inward beneath it and lock thereon. In thus forcing them down, each clamping finger will partially unroll, but the remaining portion which is forced under the shoulder still forms a tight roll and this having been subjected by the pressure head to a swaging and bending action since the cap will be considerably contracted at its lower end by the seating of the rolls, it will remain firmly clamped after the pressure head is withdrawn.

While the caps are thus very firmly fastened, the jar can be quite readily opened since the rounded shape of the locking fingers facilitates the insertion of a sharp tool beneath them for forcing them out of engagement with the locking shoulder of the jar.

The number of clamping fingers may be varied and they may be rolled more or less tightly, the shape of the fingers may be also varied, although I prefer to make them broader at the base than at the tip, referring to Fig. 4, of the drawing which shows the fingers in their original form before rolling.

In Fig. 6 the depending flange of the cap is scalloped with the tips of the scallops rolled up.

It will be observed that with my construction of cap it makes no difference if the locking shoulder is not perfectly true all around, in fact it could be quite irregular since each finger finds its own seat, nor is it necessary to form the locking shoulder by a distinct offset on the jar since a mere shallow groove around the jar would accomplish the object. A further advantage of my cap is that the seating is essentially accomplished by down-

ward pressure without subjecting the jar to great lateral pressure which is liable to crack the jar.

Having thus fully described my invention, what I claim is:

1. A sheet metal sealing cap having a depending flange provided on its lower edge with a plurality of outwardly projecting locking fingers composed of extensions of said flange circumferentially rolled up on the outer face thereof and adapted to be engaged with a suitable locking shoulder on a jar without materially unrolling the locking fingers by applying downward and inward pressure to said fingers in the sealing of the jar.

2. A sheet metal sealing cap having a depending flange provided on its lower edge with a plurality of outwardly projecting locking fingers composed of spaced extensions of said flange circumferentially rolled up against the outer face thereof, the extensions being broadest at the base and tightly rolled up; said locking fingers being arranged in relation to a shoulder on a jar, whereby, in sealing, the locking fingers may be engaged therewith without materially unrolling the same by applying downward and inward pressure thereto.

3. A sheet metal sealing cap having a continuous depending flange provided with a plurality of spaced extensions at its lower edge tapering from the base to the tip, and circumferentially rolled up against the outer face of the continuous portion, said rolled up extensions forming locking fingers adapted to engage with a suitable shoulder on a jar by applying downward and inward pressure thereto in sealing the jar.

4. A sheet metal sealing cap having a continuous depending flange with spaced extensions thereon which are widest at the base and are circumferentially rolled up against the outer face of the flange, said rolled up extensions forming locking fingers adapted to engage with a suitable locking shoulder on a jar by downward and inward displacement in sealing the jar.

5. A sheet metal sealing cap having a continuous depending flange with a plurality of outwardly projecting locking fingers at the lower edge thereof formed from extensions

of said flange circumferentially rolled up against the outer face thereof, said extensions being largest at the base and of sufficient length to permit a downward displacement of the locking fingers in sealing a jar without materially unrolling the same.

6. A sheet metal sealing cap having a depending flange formed with a plurality of circumferentially extending rolls projecting outwardly from its lower edge, the flange having scallop shaped extensions on its lower edge from which said rolls are formed; said rolls adapted to have a downward and inward displacement independent of the cap and forming the clamping fingers thereof in sealing.

7. A sheet metal sealing cap provided with a plurality of independent locking fingers each being coiled outwardly and upwardly for the purpose set forth.

8. A sheet metal sealing cap provided with a plurality of tapering locking fingers each being coiled outwardly and upwardly for the purpose set forth.

9. A sheet metal sealing cap provided with a plurality of independent locking fingers each being coiled outwardly and upwardly, said locking fingers being of a length to allow a portion thereof to remain coiled when engaged on a jar or bottle.

10. A metallic sealing cap provided with a plurality of independent locking fingers each being coiled outwardly and upwardly, said locking fingers adapted to be engaged with a locking shoulder on a jar or bottle by applying downward and inward pressure.

11. A metallic sealing cap provided with a plurality of independent locking fingers each being coiled outwardly and upwardly, said locking fingers adapted to be engaged with a locking shoulder on a jar or bottle by applying downward and inward pressure, the locking fingers being of a length to allow a portion thereof to remain coiled.

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

RICHARD E. MEYER.

Witnesses:

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