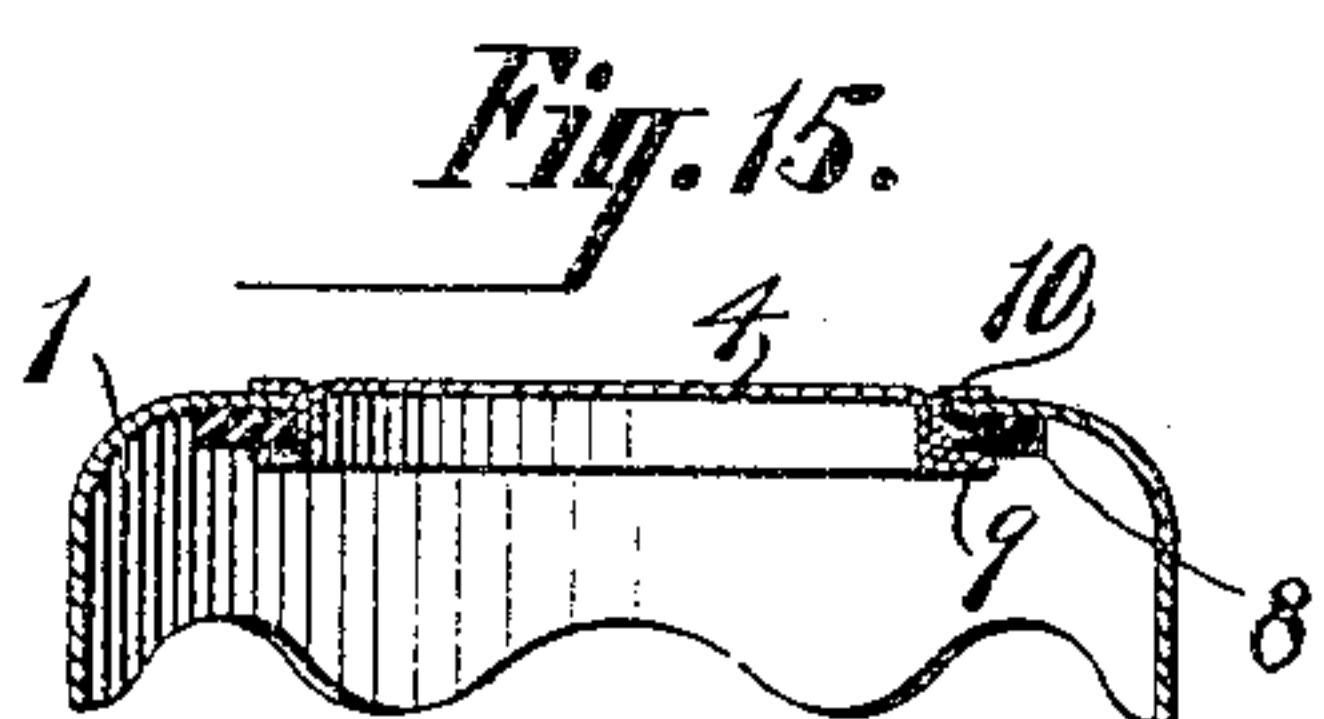
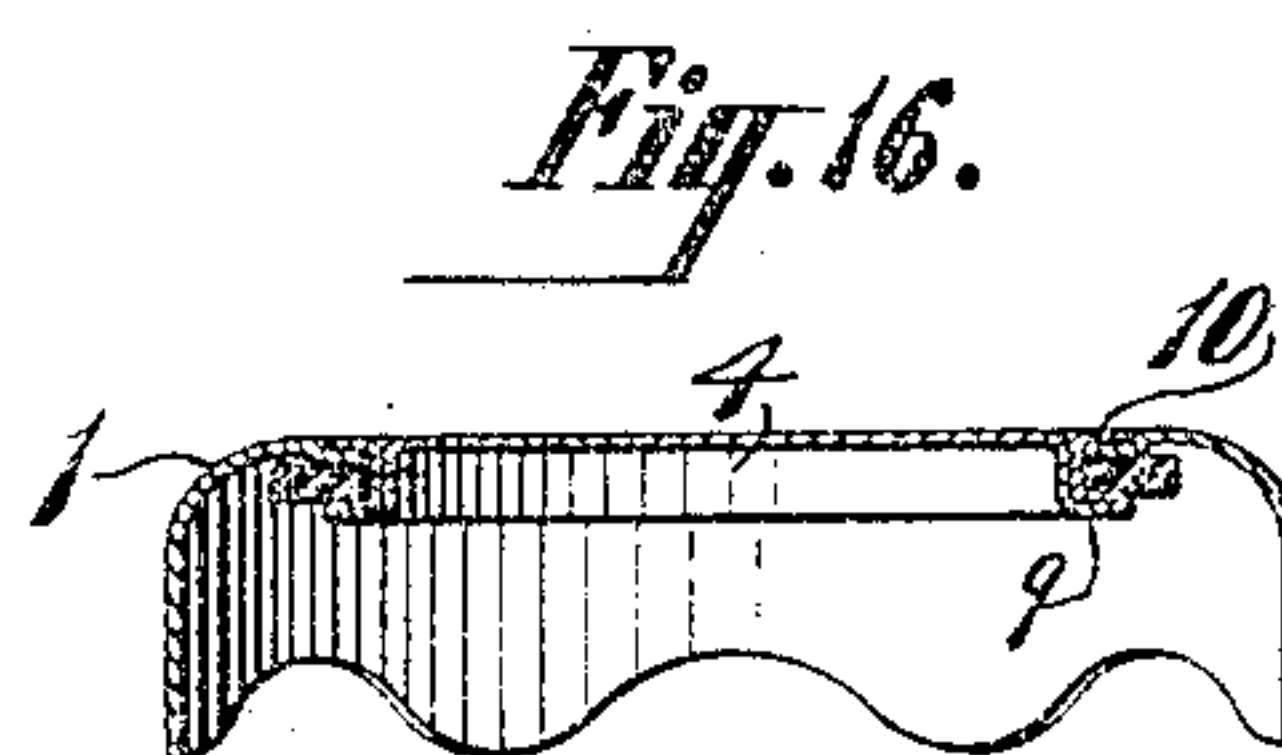
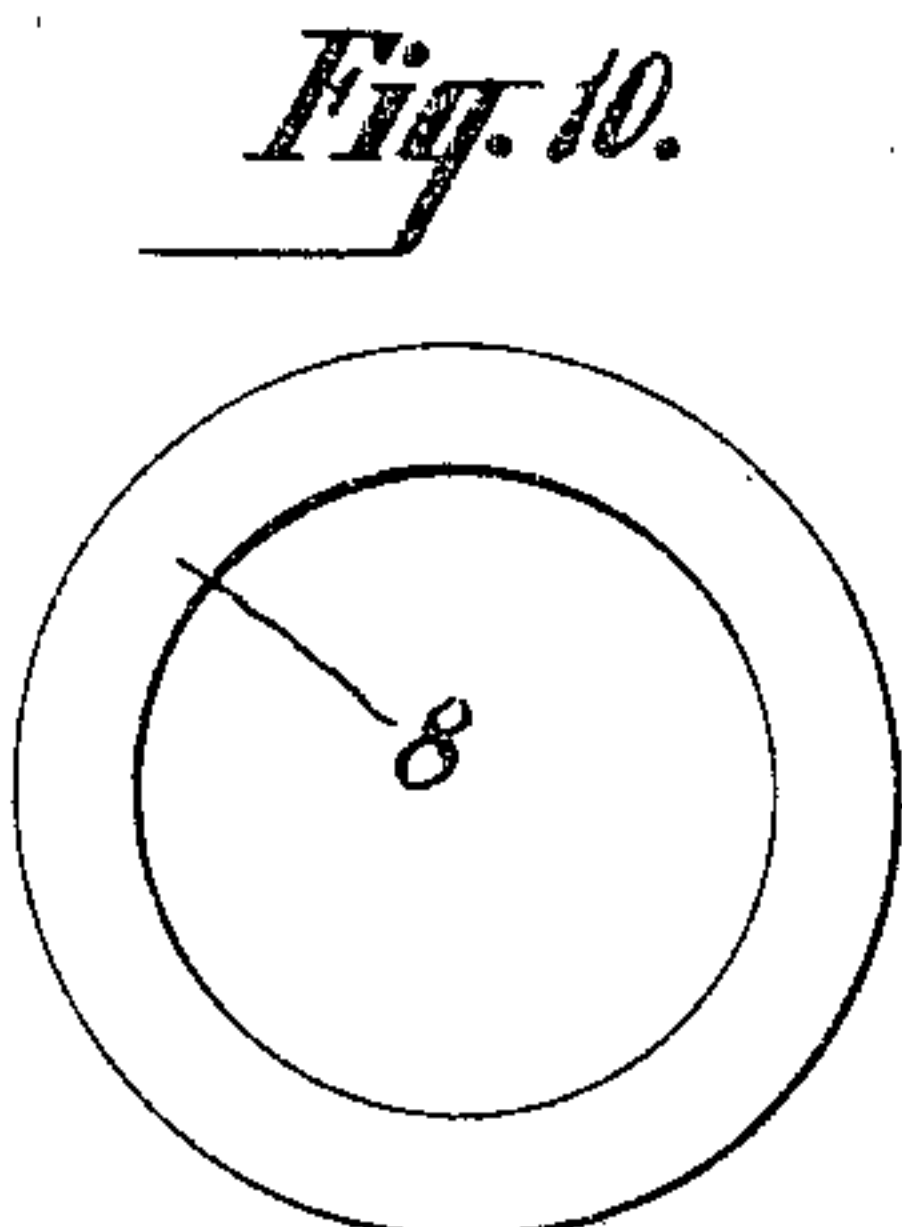
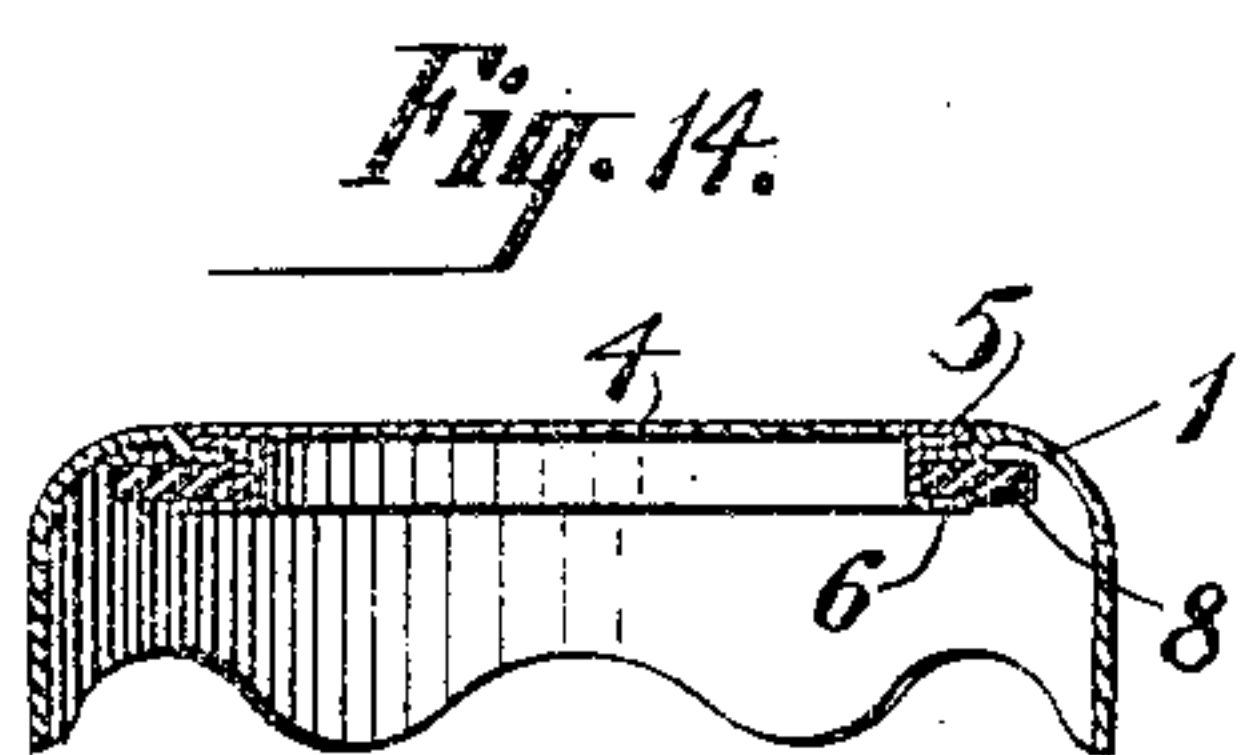
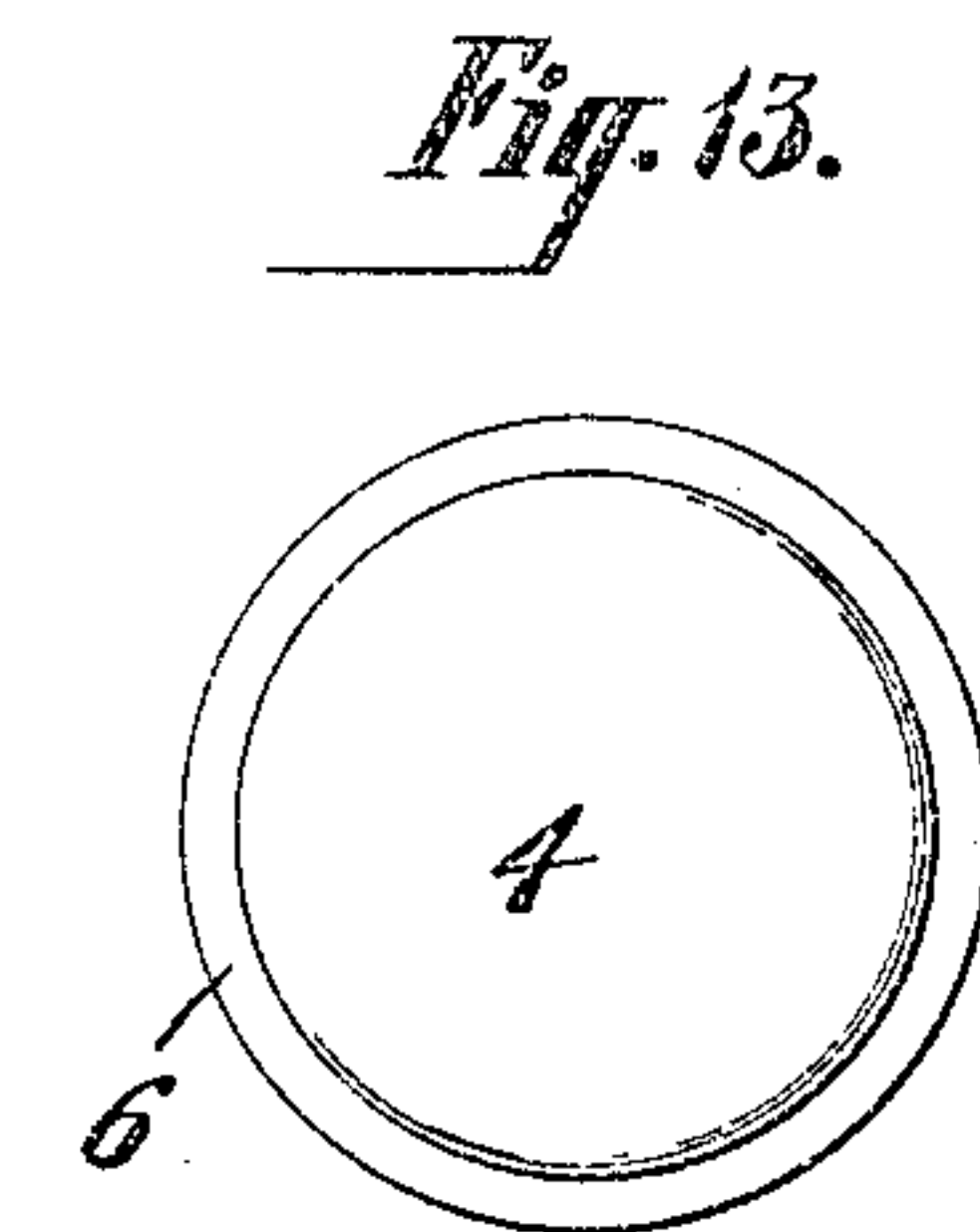
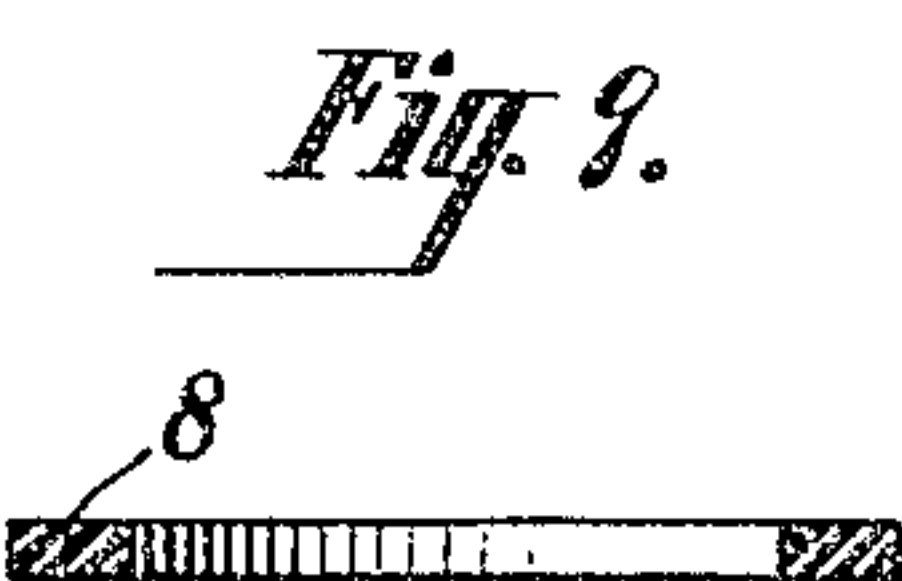
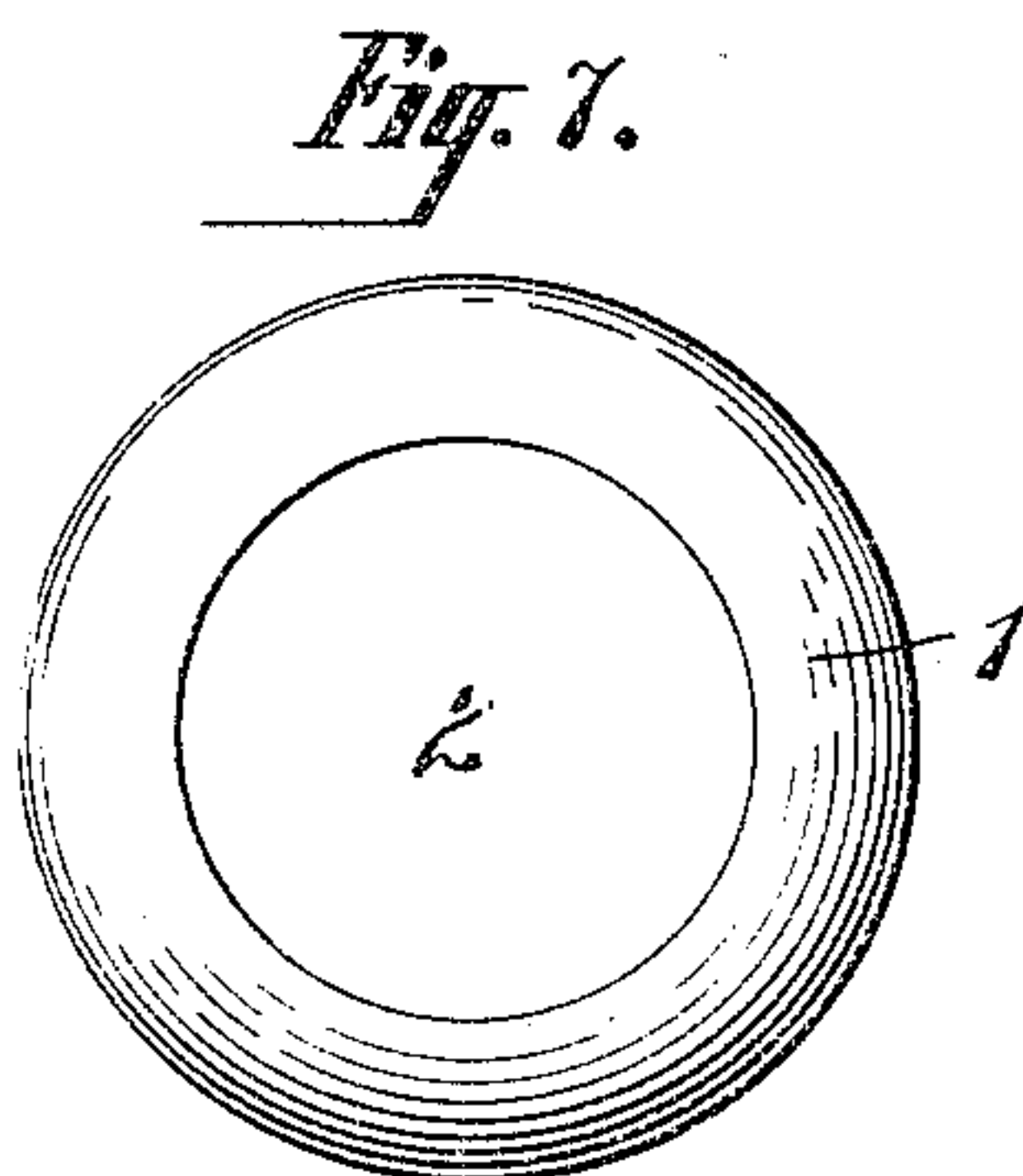
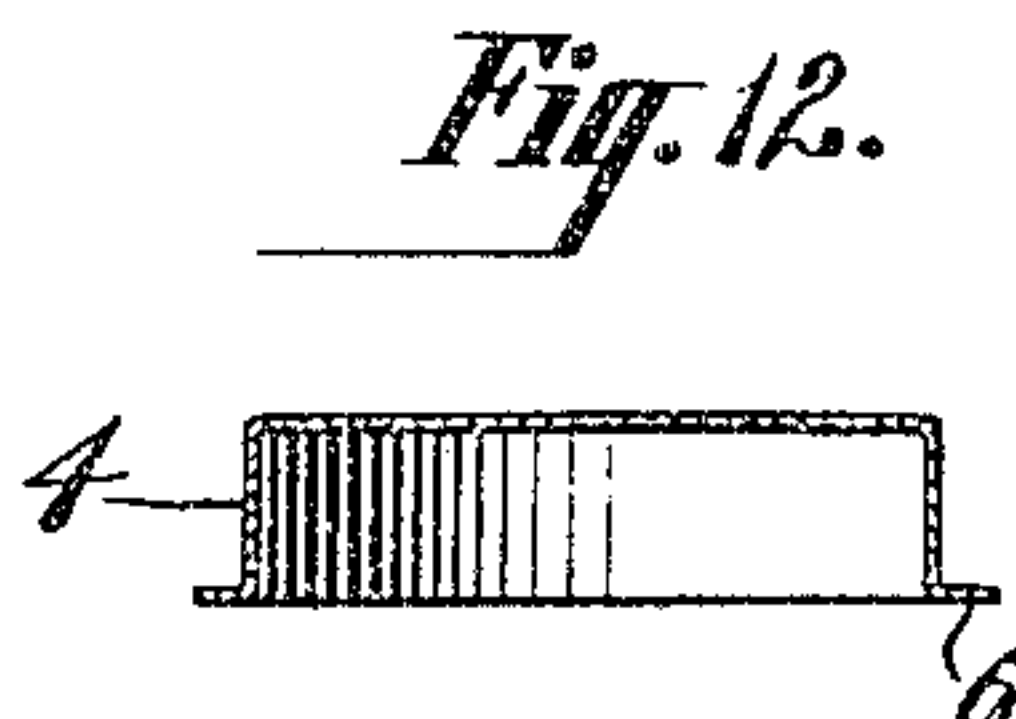
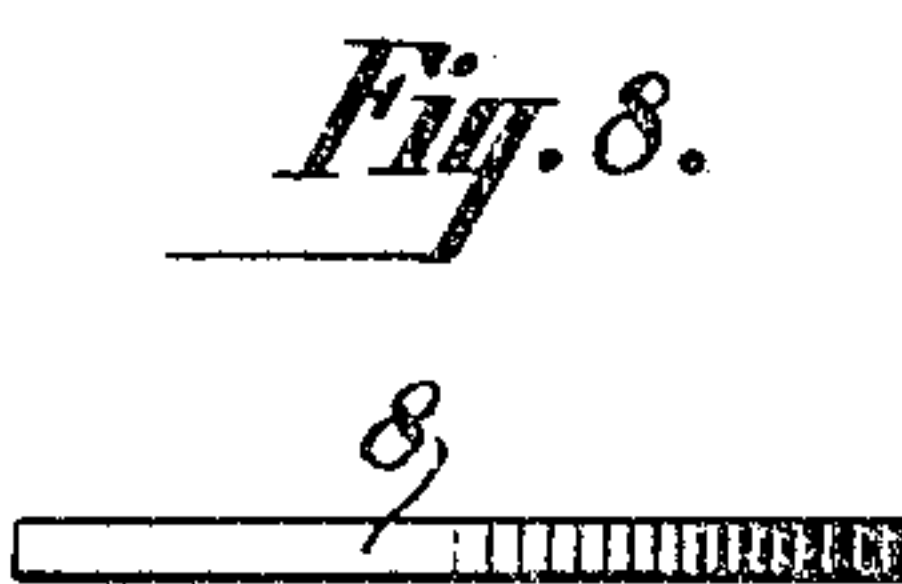
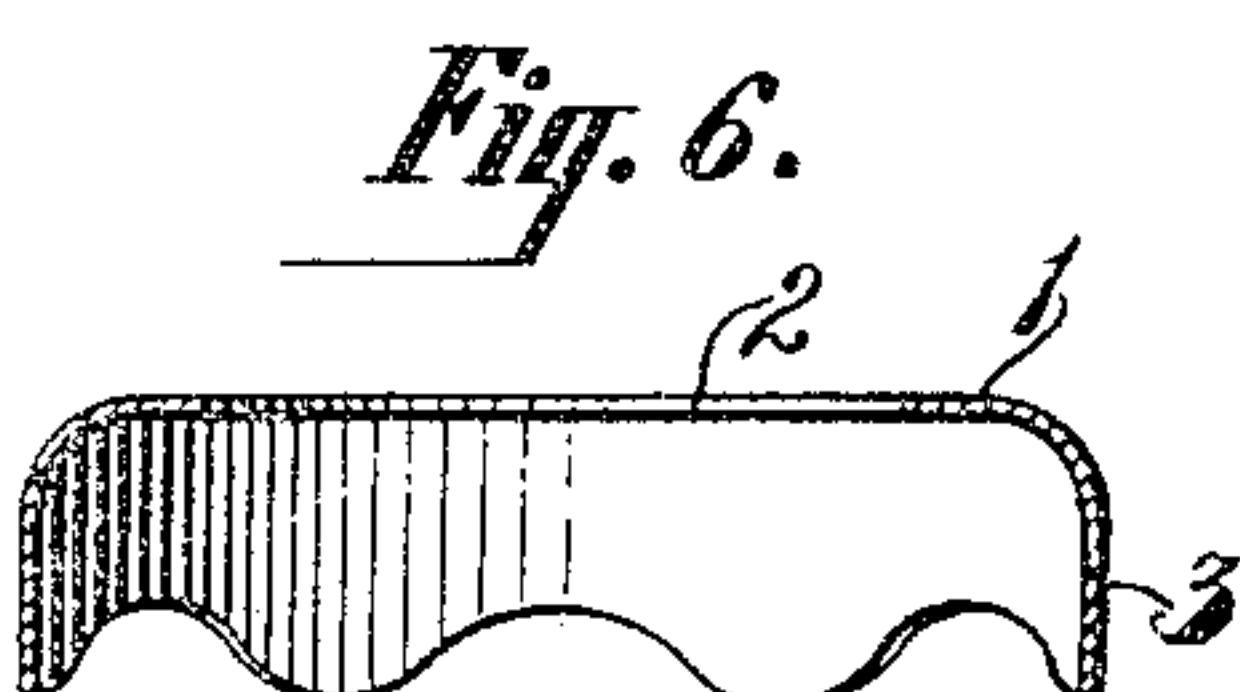
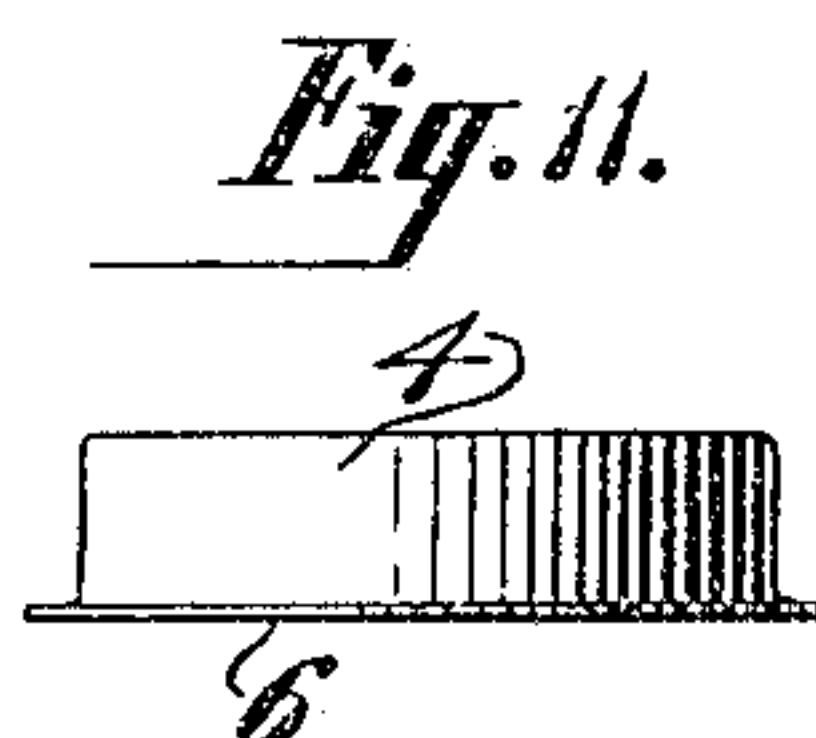
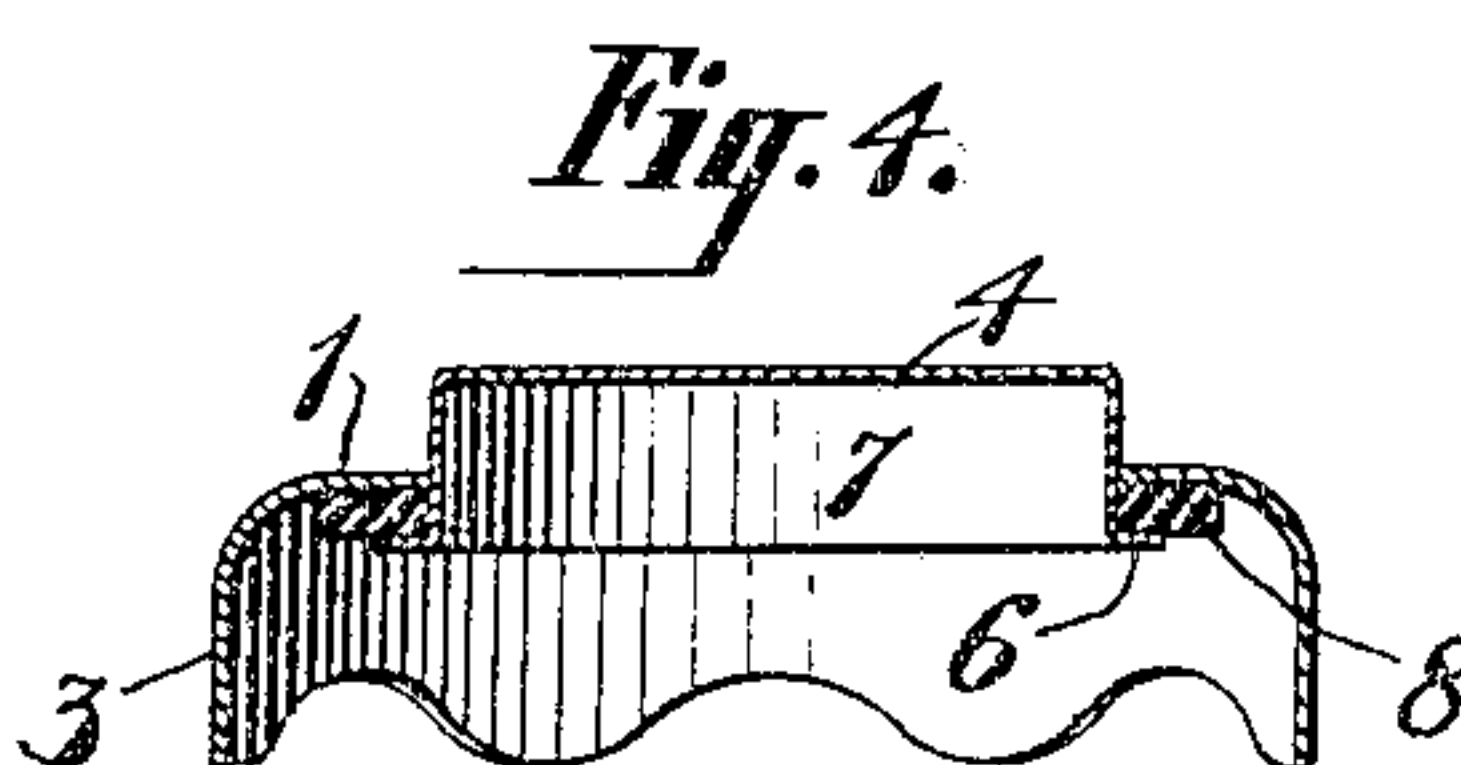
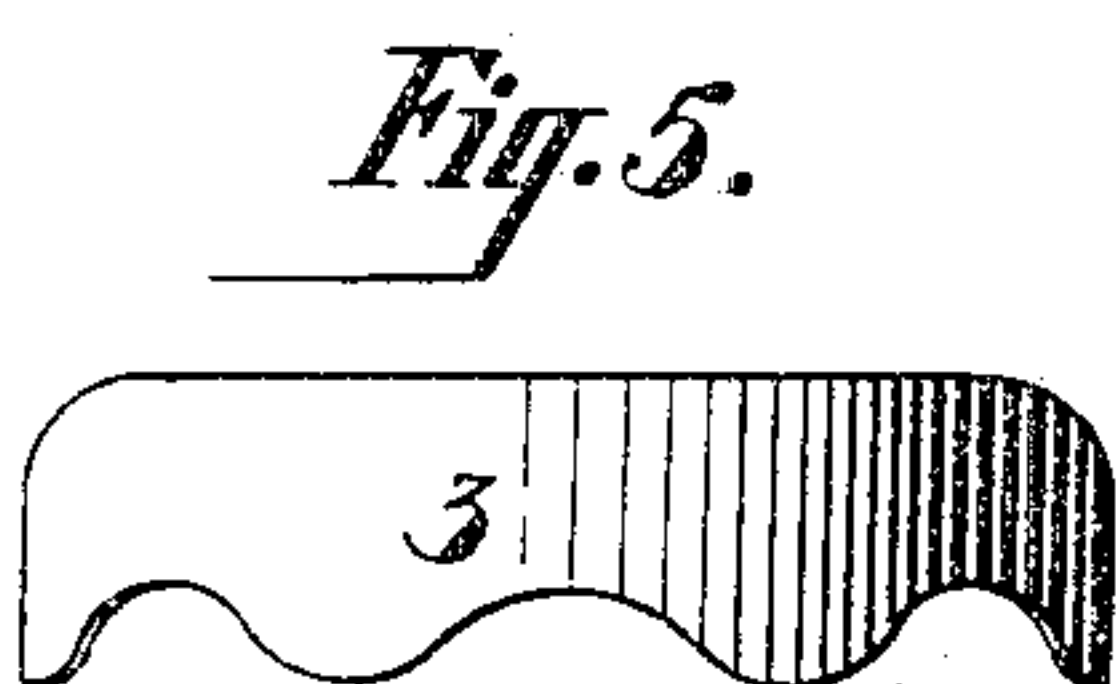
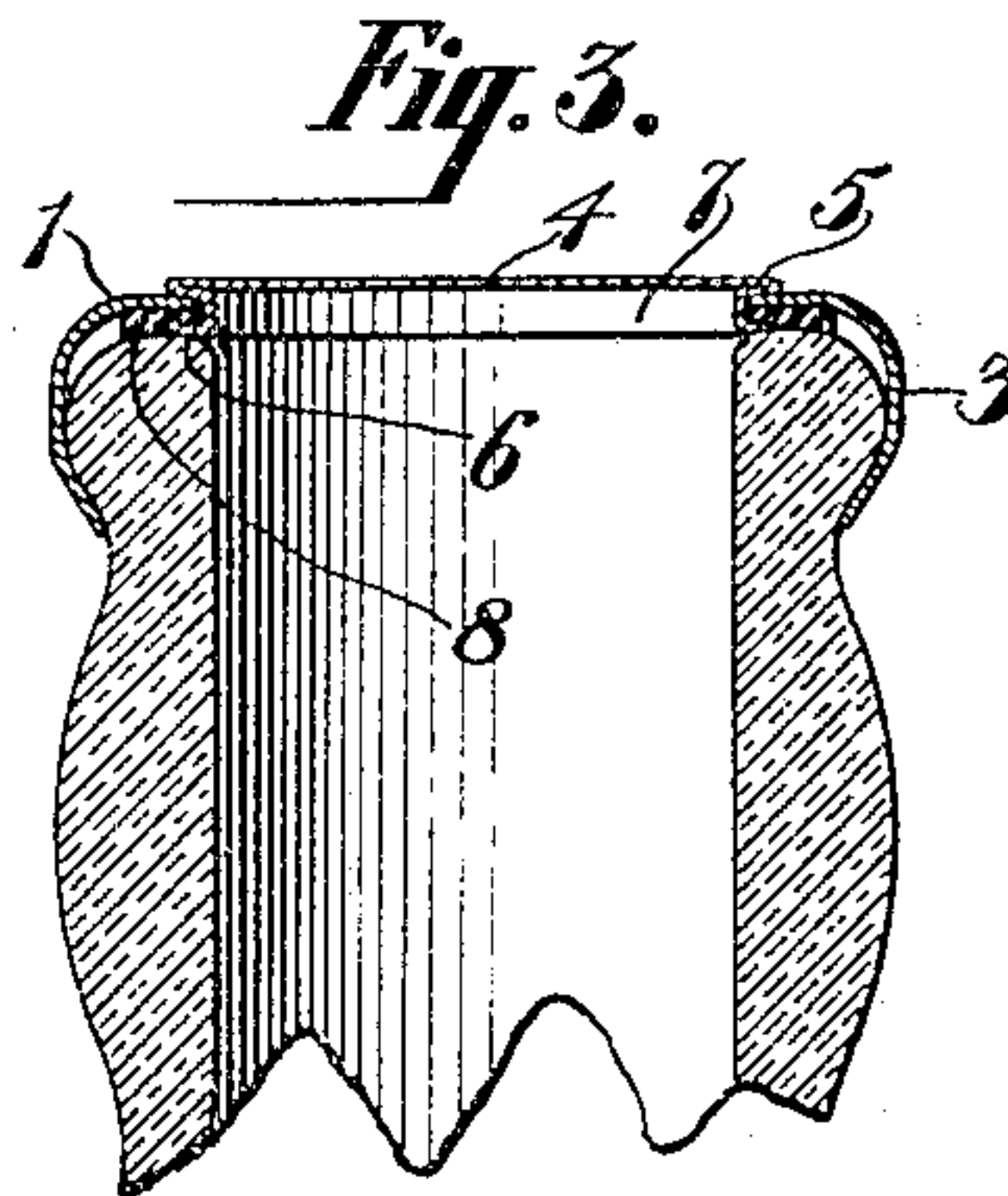
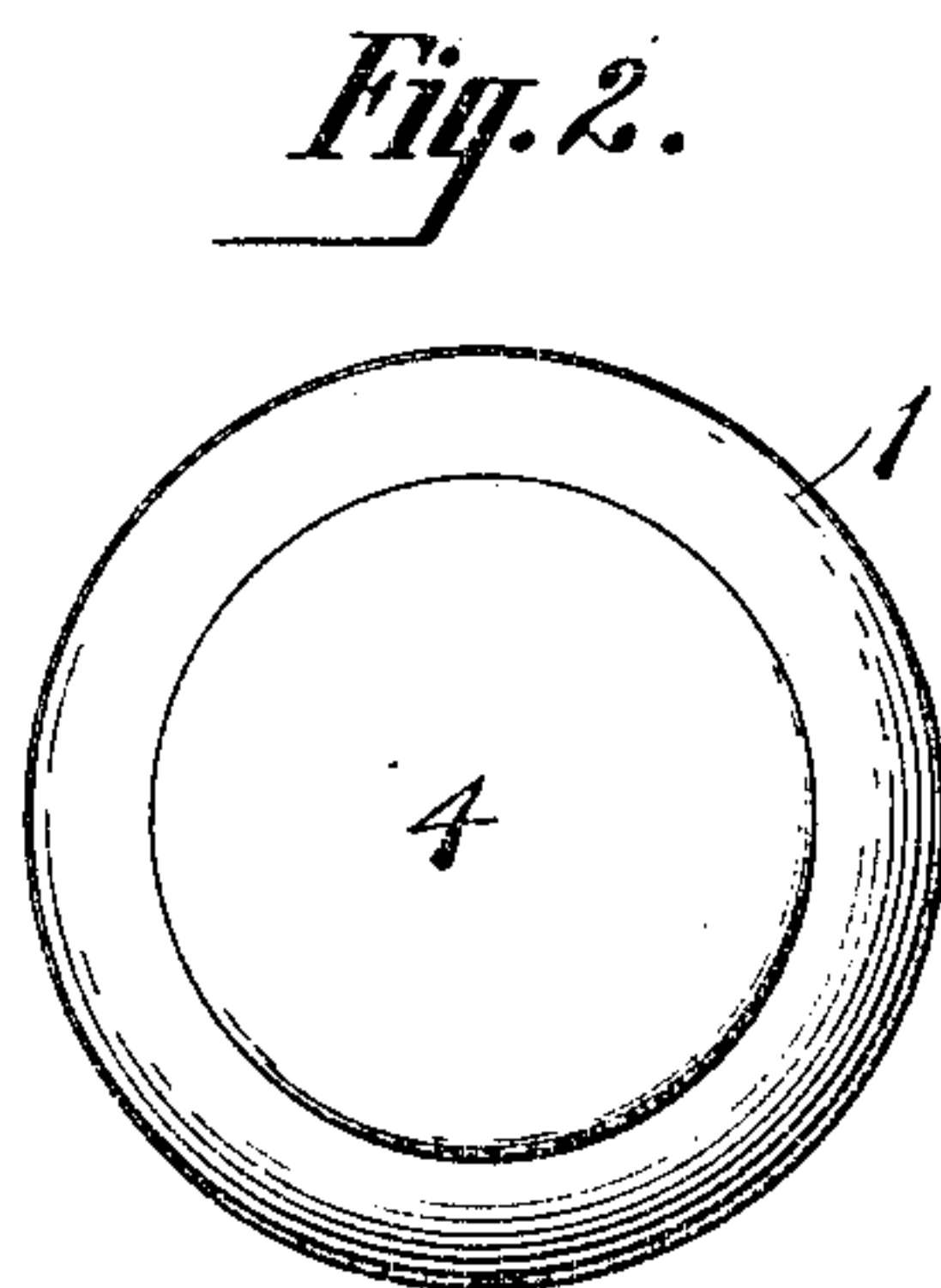
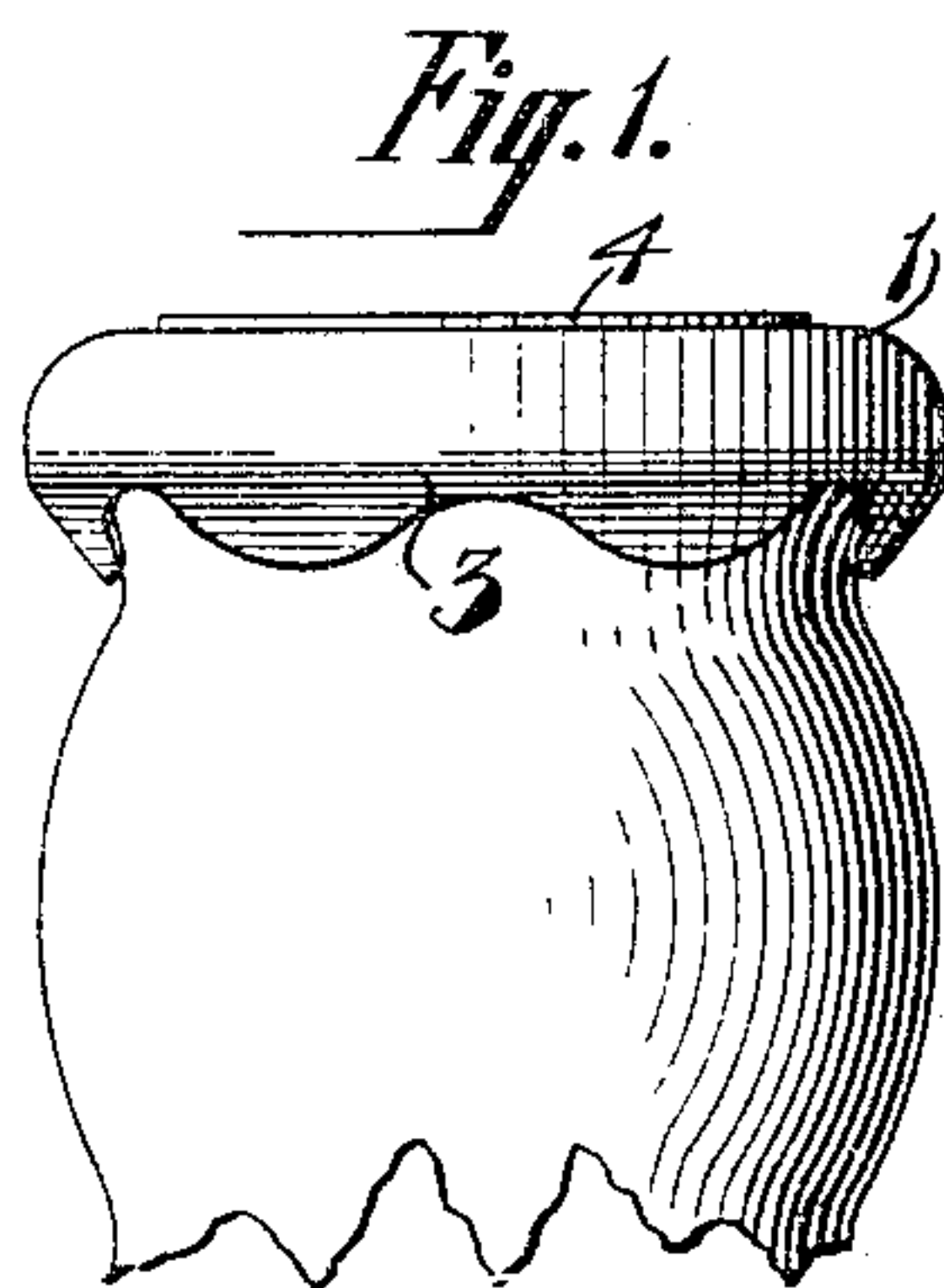


No. 793,293.

PATENTED JUNE 27, 1905.

K. C. GILLETTE.
SEALING CAP.

APPLICATION FILED OCT. 10, 1904.



Witnesses:
H. G. Hachenberg.
Henry Thieme.

Inventor:
King C. Gillette
by attorneys
Brown & Leland

UNITED STATES PATENT OFFICE.

KING C. GILLETTE, OF LONDON, ENGLAND.

SEALING-CAP.

SPECIFICATION forming part of Letters Patent No. 793,293, dated June 27, 1905.

Application filed October 10, 1904. Serial No. 227,815.

To all whom it may concern:

Be it known that I, KING C. GILLETTE, a citizen of the United States, and a resident of London, England, have invented a new and useful Improvement in Sealing-Caps, of which the following is a specification.

This invention consists in certain improvements in sealing-caps for vessels, and has for its object to provide a sealing-cap comprising an outer ring member of sufficiently strong material to securely lock the cap to the vessel and an inner disk member of readily-puncturable material.

A further object is to provide a cap of this character in which a sealing-ring is permanently clamped between the inner and outer members of the cap.

In a device of this character a very soft metal—such, for instance, as aluminium—may be used for the inner member of the cap and a stronger metal—such, for instance, as tin—may be used for the outer member. The metal of the inner member if made of sufficient strength to clamp the cap to the vessel would thereby be too thick and heavy to permit it to be readily punctured.

A still further object is to provide a cap of the above character in which the inner member is made of non-corrosive material, the shape of the member being such that the packing-ring while engaging the mouth of the vessel is not exposed to the contents of the vessel, the inner member itself being the only part of the cap so exposed.

In the accompanying drawings, Figure 1 is a view in side elevation of the upper portion of a vessel—such, for instance, as a bottle—with my improved cap secured thereto. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical central section through the parts. Fig. 4 is a vertical central section through the inner and outer members and packing-ring before the members are united by the formation of the upper flange on the inner member. Figs. 5, 6, and 7 represent the outer member in side view, vertical central section, and top plan. Figs. 8, 9, and 10 represent the packing-ring in side elevation, vertical central section, and top plan. Figs. 11, 12, and 13 represent the inner member in side elevation, ver-

tical central section, and top plan. Fig. 14 is a vertical central section through a cap of slightly-modified form. Fig. 15 is a similar view of another form of cap, and Fig. 16 is a similar view of a fourth form of cap.

The crown of the outer ring member of the cap is denoted by 1 and its centrally-arranged hole by 2. The crown of the outer member is provided with a plain depending flange 3, the bottom edge of which is represented of irregular form. The inner member of the cap comprises a disk portion 4 and upper and lower laterally-extended circumferential flanges. In the first form shown in the drawings the disk portion 4 of the inner member is provided with an upper flange 5, forming an extension of the disk portion, and a lower flange 6, spaced a short distance from the upper flange 5. A vertical wall 7 connects the upper and lower flanges of the inner member.

The packing-ring is denoted by 8 and may be made of any well-known yielding material suitable for the purposes desired.

In the form of cap above referred to the inner member is permanently secured to the outer member as follows: The blank from which the inner member is formed is of cup shape, the vertical wall of the cup substantially fitting the hole 2 in the outer member. The packing-ring 8 is slipped over the vertical wall of the cup until it rests upon the lower flange 6. The cup is then inserted through the hole 2 and the top of the cup is upset, so as to form the flange 5, overlapping the ring member, and thus clamping the packing-ring between the ring member and the lower flange 6.

In the form shown in Fig. 14 the crown of the outer ring member is depressed around the hole 2, so that the disk portion of the inner member will be flush with the top of the crown.

In the form shown in Fig. 15 the blank which forms the inner-ring member is bent so that the doubled-over portion of the same forms the lower flange 9 and the single thickness of metal forms the upper flange 10, which is in the same plane with the disk portion 4.

In the form shown in Fig. 16 the crown of the outer ring member is depressed to receive

the upper flange 10, so that the inner disk member will not project above the top of the outer ring member.

The inner disk member is made of non-corrosive material—such, for instance, as aluminium—so that it may be readily punctured for gaining access to the interior of the vessel. The lower flange of the inner member rests upon the top of the mouth of the vessel, so as to protect the packing-ring 8 from coming into contact with the contents of the vessel. The outer ring member of the cap is made of some suitable material of sufficient strength to securely hold the cap in position when the depending flange 3 is bent inwardly over an exterior shoulder at the mouth of the vessel. In the present instance this ring is made of tin.

By the construction herein set forth I am enabled to provide a cap having a readily-puncturable portion, which cap at the same time will be securely held in position over the mouth of the vessel. This would not be possible if the same material which is used for the portion over the mouth of the vessel was the same as the portion which clamps the cap to the vessel.

What I claim as my invention is—

1. A sealing-cap comprising outer and inner members clamped together, the inner member being readily puncturable.

2. A sealing-cap comprising an outer member, an inner member and a packing-ring secured together, the inner member being readily puncturable.

3. A sealing-cap comprising an outer ring member of one material and an inner member of aluminium clamped to the outer ring member.

4. A sealing-cap comprising an outer ring member of tin and an inner disk member of

readily-puncturable material clamped to the outer ring member.

5. A sealing-cap comprising an outer ring member of tin and an inner disk member of aluminium clamped to the outer ring member.

6. A sealing-cap comprising an outer member of strong material and an inner member of sufficiently weak material to be readily punctured clamped to the outer member.

7. A sealing-cap comprising an outer member, an inner member clamped to the outer member and a packing-ring permanently secured between the outer and inner members.

8. A sealing-cap comprising an outer ring member, a packing-ring and an inner disk member having flanges overlapping the said outer ring member and packing-ring, for securing the parts in assembled position.

9. A sealing-cap comprising an outer ring member of suitable material and an inner disk member of non-corrosive material permanently secured to the outer ring member.

10. A sealing-cap comprising an outer ring member having a depending flange for attaching the cap to a vessel, and an inner disk member permanently secured to the outer ring member.

11. A sealing-cap comprising an outer ring member having a depending flange for attaching the cap to a vessel and an inner disk member of non-corrosive material permanently secured to the outer ring member.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 5th day of October, 1904.

KING C. GILLETTE.

Witnesses:

FREDK. HAYNES,
C. S. SUNDGREN.