

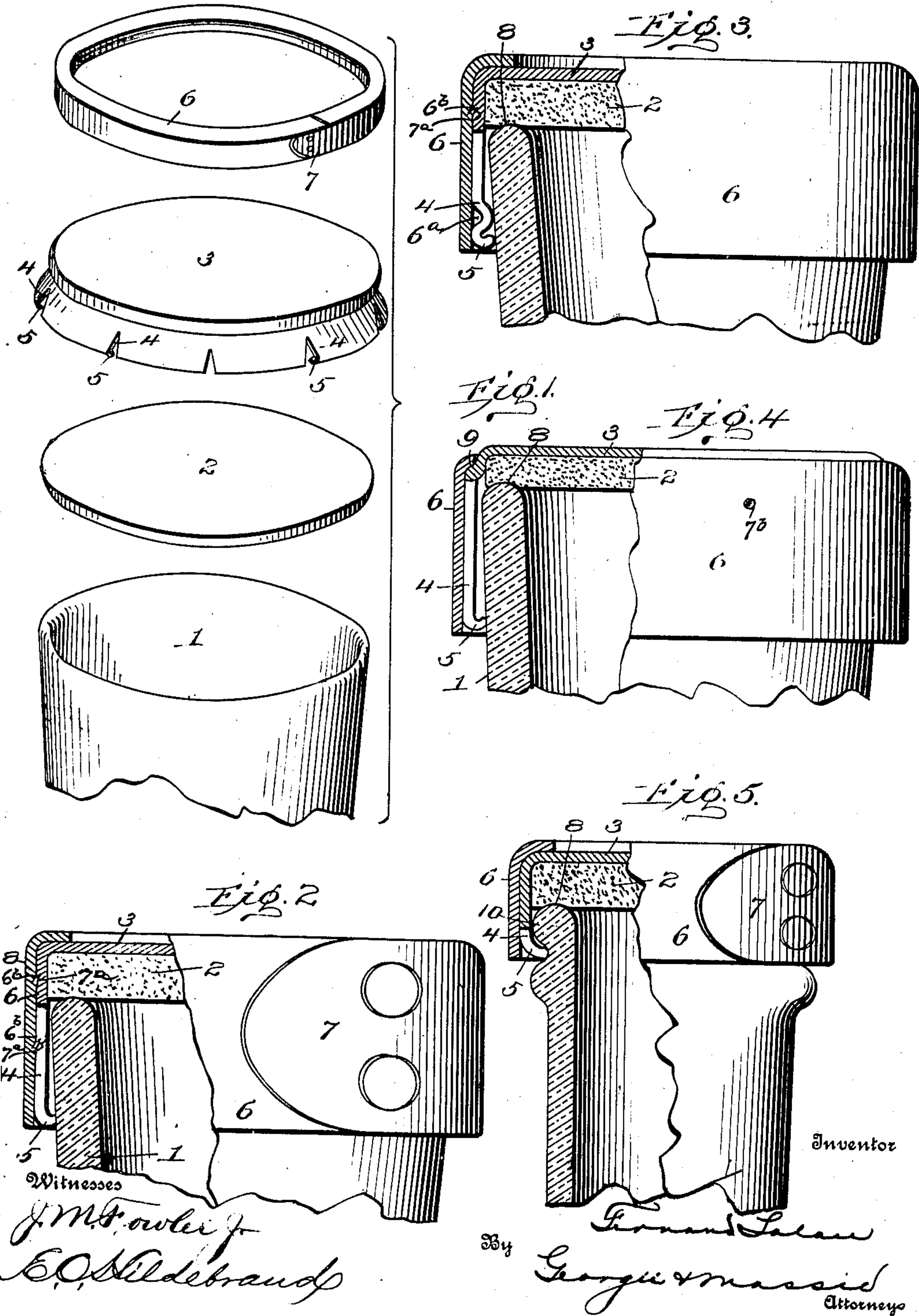
No. 886,994.

PATENTED MAY 5, 1908.

F. LALAU.
CLOSURE FOR RECEPTACLES.

APPLICATION FILED APR. 15, 1905.

2 SHEETS—SHEET 1.

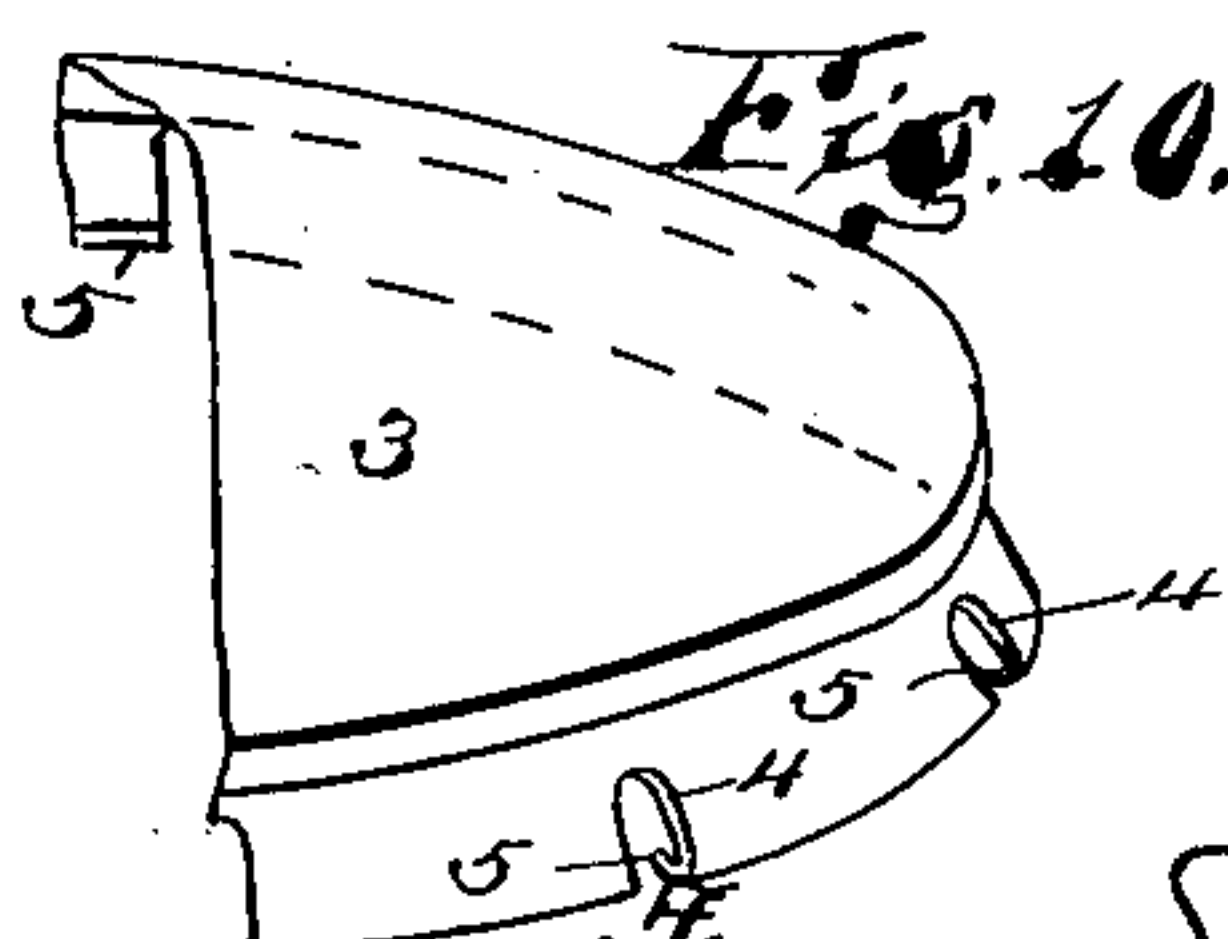
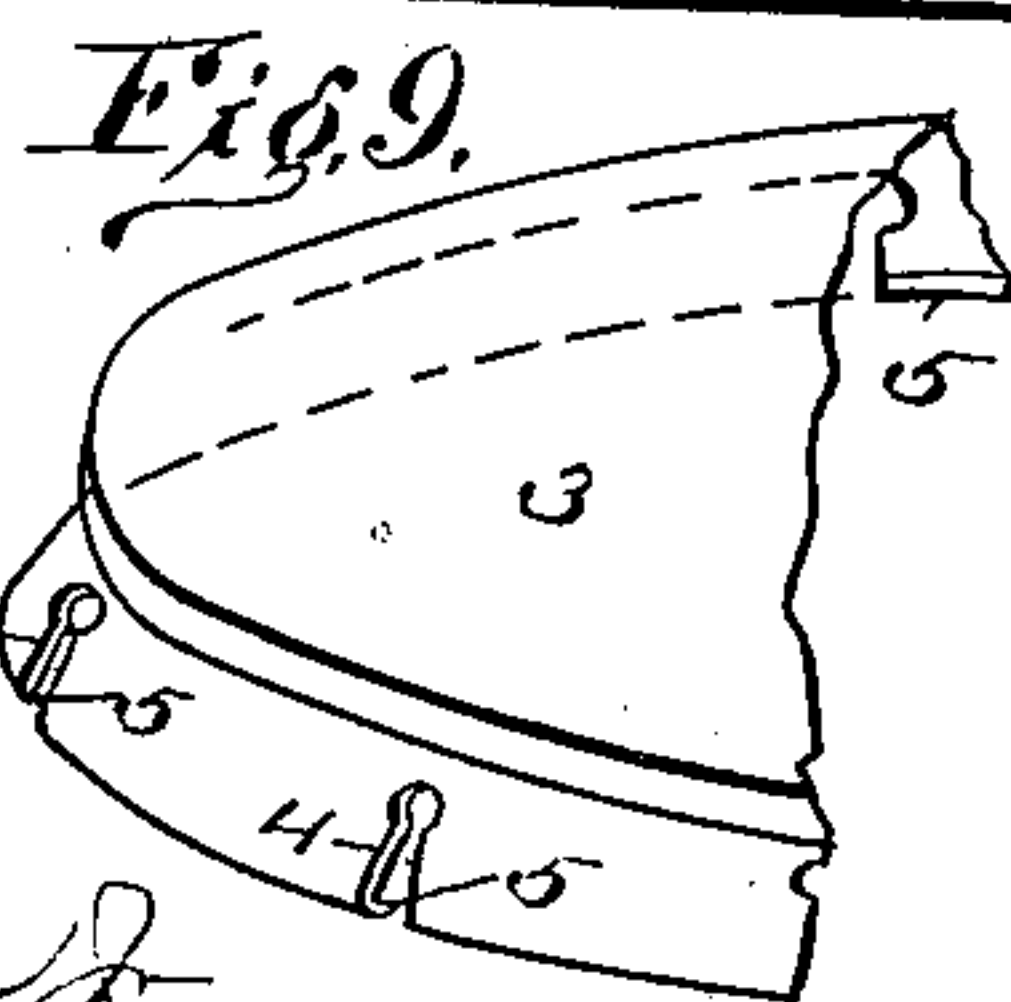
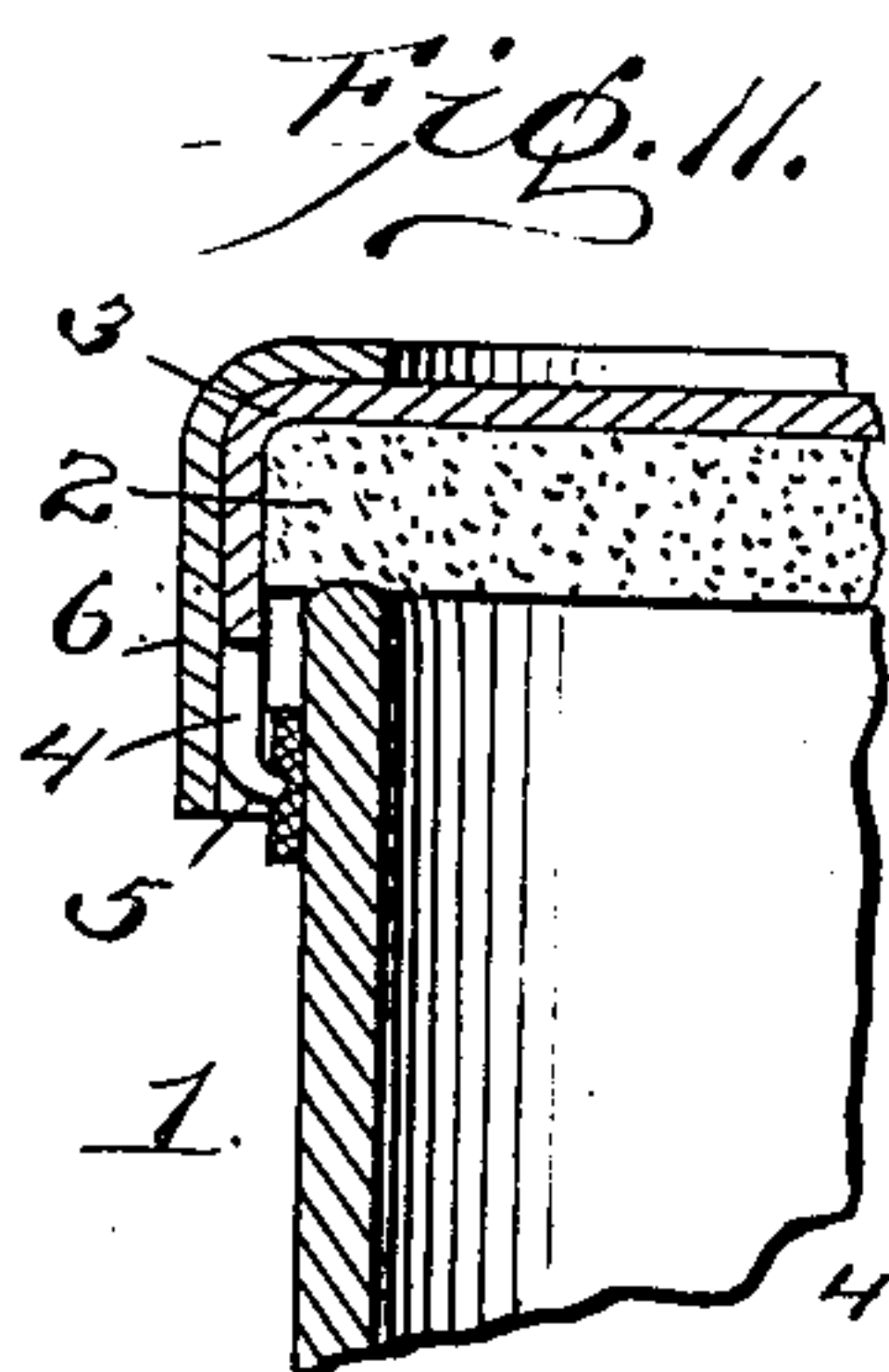
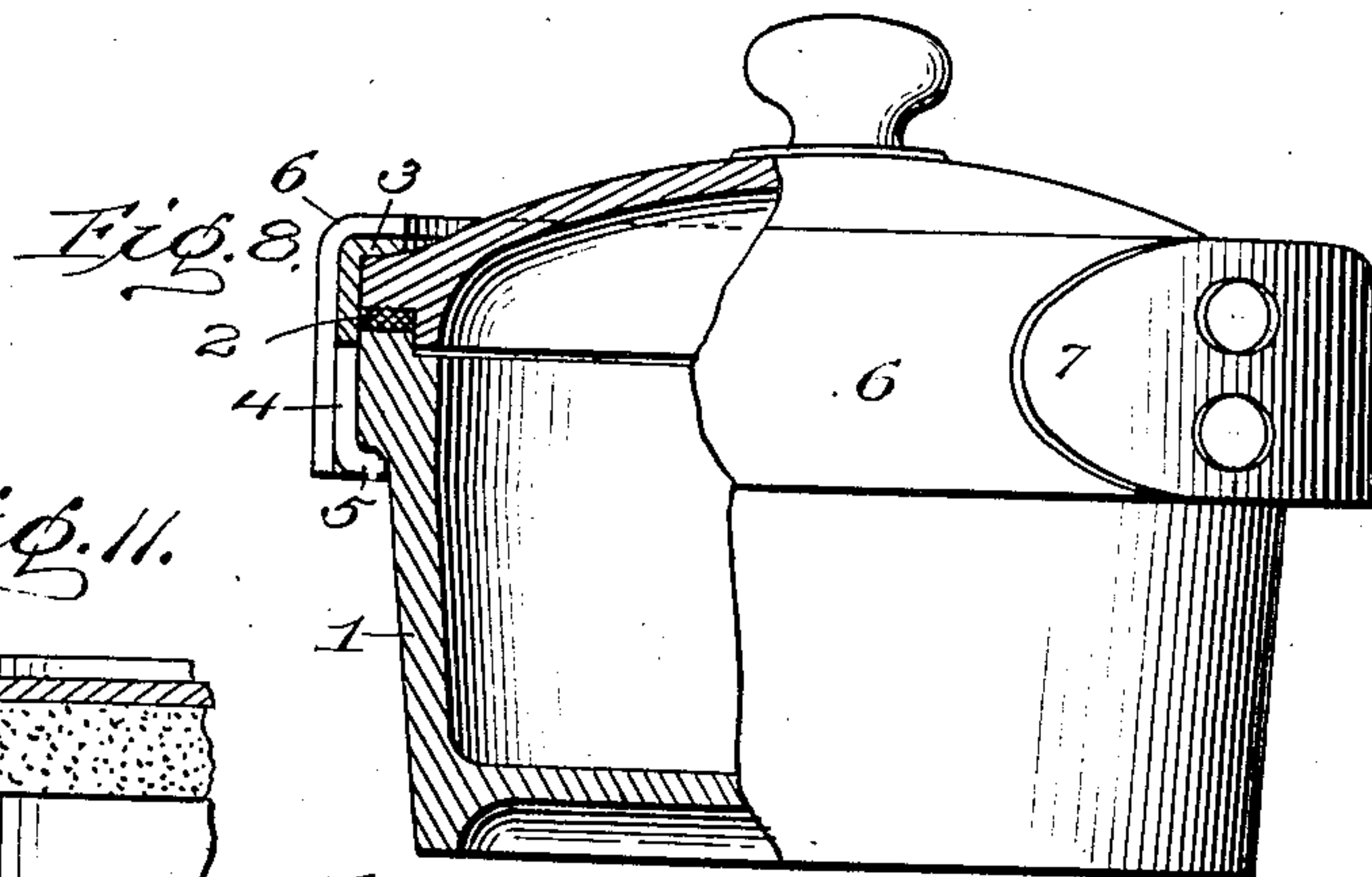
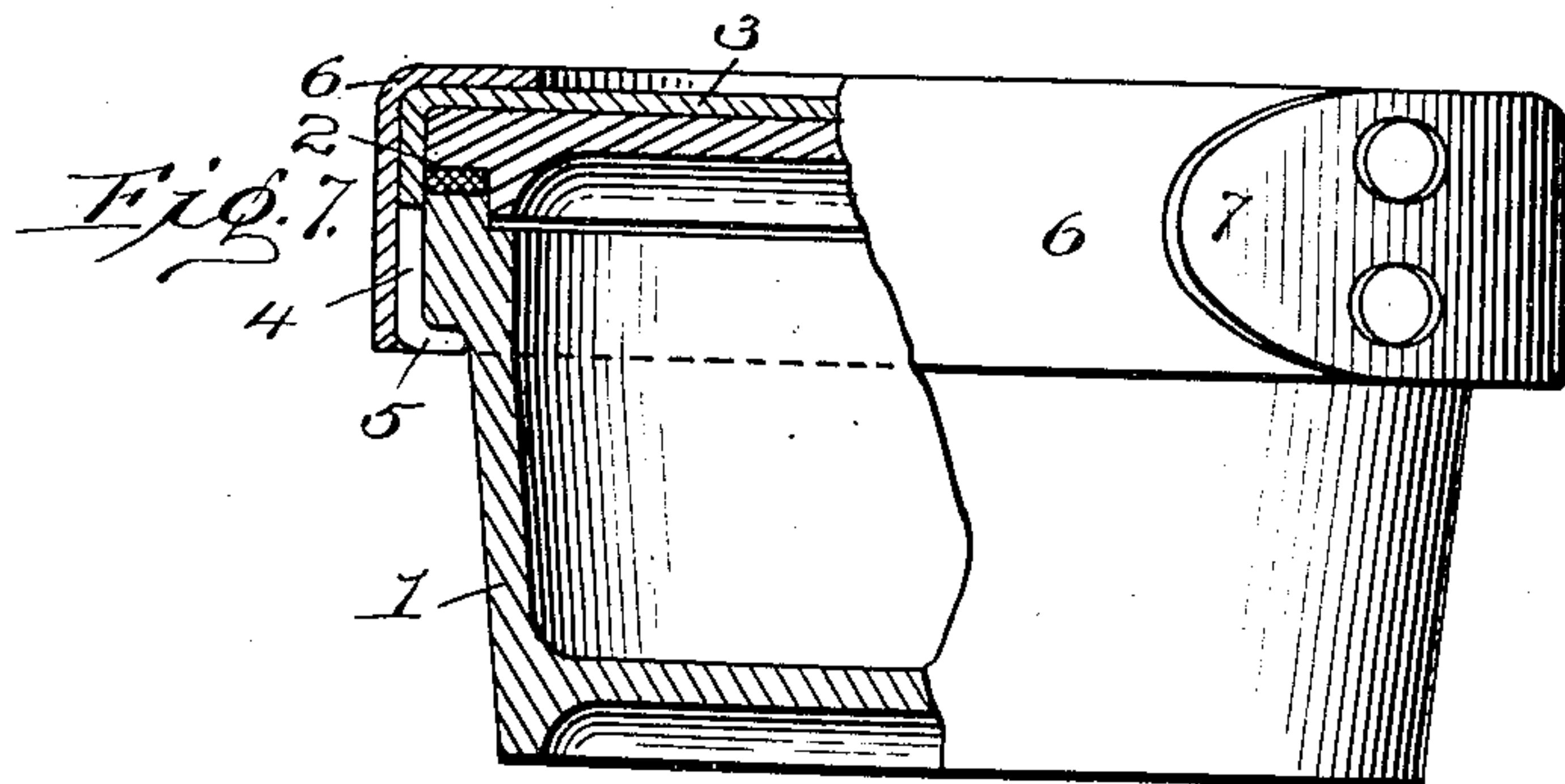
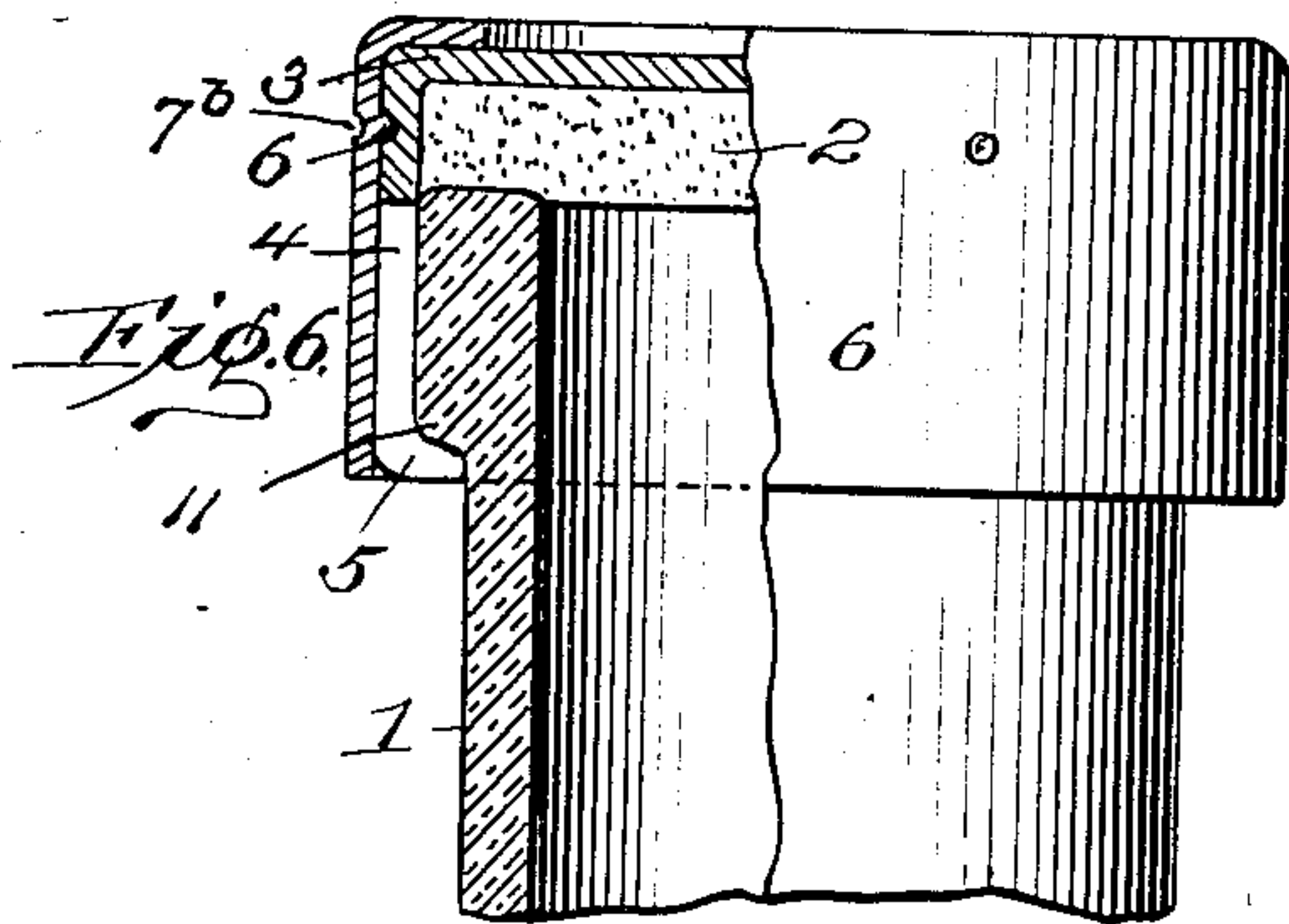


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2 SHEETS—SHEET 2.



Witnesses

J. M. Fowler
E. O. Melebrand

Inventor

By

Fernand Lalau
Georgie & Massie
Attorneys

UNITED STATES PATENT OFFICE.

FERNAND LALAU, OF PARIS, FRANCE, ASSIGNOR TO COMPAGNIE DES BOUCHAGES
HERMÉTIQUES SIMPLEX, OF PARIS, FRANCE, A CORPORATION OF FRANCE.

CLOSURE FOR RECEPTACLES.

No. 886,994.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed April 15, 1905. Serial No. 255,829.

To all whom it may concern:

Be it known that I, FERNAND LALAU, residing at Paris, France, have invented a new and useful Improvement in Closures for Receptacles, which improvement is fully set forth in the following specification.

This invention has for its object an arrangement for closing any type of receptacle having a sufficiently rigid mouth.

10 The arrangement consists of two main parts: 1. A cap or capsule, the crown of which may be entire or cut away, and whose sides have in them several longitudinal slits and are turned or rolled inwards for a certain length. 2. A continuous ring or band, or one having its ends separably connected by hook and eye, of such a size that it can be made to fit tightly upon the capsule. A disk shaped or annular washer of cork, india rubber or other suitable material, is used in addition to these two essential parts, to insure that the closing shall be hermetical and firm. Before application, the arrangement assumes the form of a capsule whose sides are partly cylindrical, and for the rest of their length flaring out and split, and whose edges are turned or rolled inwards. The capsule contains the washer, and on its cylindrical part the ring is fitted.

30 The arrangement is applied by placing the assemblages of elements on the mouth of the receptacle. Pressure is exerted on the capsule in such a way as to crush the washer against the rim of the receptacle, then the ring is forced down over the sides of the capsule which are thus bent inwards and confined in engagement with the receptacle or under a flange on it.

40 The receptacle is opened by removing the ring. This is facilitated by employing a separable ring fastened by a hook and eye. The capsule is then easily removed.

The cap with part of its crown cut away is used when it is not necessary to completely cover the lid of the receptacle. In the case where the receptacle has an independent cover to be held in place by this method of closing, the washer—elastic or not—is placed between the cover and the receptacle.

50 The drawings annexed show examples of some ways of carrying out the invention.

In the drawings Figure 1 shows the different parts before they are assembled according to this invention for closing a conical recep-

tacle with a plain edge. Fig. 2 shows partly in section through one of the slits and to a larger scale the parts in position on the receptacle. Figs. 3 and 4 show modifications. Fig. 5 shows in section the arrangement applied to closing a bottle with a grooved head. Fig. 6 is a similar section of a bottle having an angular head. Fig. 7 is a similar section illustrating the application of the invention to a receptacle with an independent cover which is completely covered by the capsule. Fig. 8 shows an example in which the independent cover is not completely covered by the capsule. Figs. 9 and 10 are variations showing different forms of slits in the capsule. Fig. 11 shows a closure applied to a cylindrical vessel with smooth sides.

In Figs. 1 to 4 the receptacle 1 to be closed is flaring with smooth sides. Fig. 1 shows the different elements separately and ready to be assembled before use. These elements consist of: 1st. The elastic washer 2 of sufficient diameter to cover the edges of the receptacle.—2nd. The capsule 3 whose internal diameter is the same as that of the washer 2, and whose side walls are cylindrical in their upper part and flare out in their lower part and having in them longitudinal slits 4, the sides being bent or rolled inwards at 5 for a suitable portion of their length.—3rd. The band 6 having its ends separably connected by a hook and eye at 7 or continuous. This band is of such diameter that when pressed home onto the capsule 3 it forces its sides inwards, so that they become cylindrical instead of conical.

Fig. 2 shows the various parts in position. A tight joint is insured at 8 by the elastic washer 2. The turned in edges 5 of the capsule 3 are firmly pressed against the receptacle 1 by the ring 6 and cannot rise owing to the conical shape of the receptacle 1. An effort to pull upwards tends to unroll and jam the turned in edges against the glass. The walls of the capsule can be made of different forms, either smooth as in Figs. 1, 2 and 4, or grooved as shown at 6^a in Fig. 3 to give them more elasticity at the points of contact with the receptacle, or again may be of any other form suitable for this invention. They may in particular have in them teeth 6^b directed downwards which firmly engage with similar and oppositely directed teeth 7^a in the ring to insure that the receptacle shall

remain closed, as shown in Fig. 2. This security can in short be obtained by any other appropriate means such as by forcing the material of the ring into the side of the capsule by means of a punch, as shown at 7^b in Fig. 4.

Among other ways the ring may engage as shown in Fig. 4 with a flange 9 on the capsule 3 which projects beneath it.

10 In the case of receptacles whose edges are not smooth that is to say having one or more moldings of any form, either raised or sunk, the turned in edges 5 engage firmly with one or more of these moldings. Their form and
15 size is of course adapted to the receptacle to be closed.

Figs. 5 and 6 show the closing of bottles or jars of this sort in which the neck has a grooved head 10 or a sharp angled head 11.

20 If the receptacle has a lid of its own the present system of closing is also applicable so that the lid is completely covered up or is left visible. In the first case as shown in Fig. 7 the elastic washer is placed under the
25 lid of the receptacle; it is either a complete cover or an annulus according to the shape of the lid. The closing is otherwise the same as in the preceding cases. In the second case, the washer is arranged in the same way
30 as just described but the capsule is cut away in the middle as is shown in Fig. 8. It is reduced so as to be only an annulus which it is advantageous to cut into sections to facilitate opening the receptacle.

35 The shape, number and size of the slits in the capsule are arranged according to the nature of the material employed for the different pieces. Figs. 1 to 8 show simple slits, Figs. 9 and 10 show modifications but other
40 convenient forms may be used. Similarly the length of the slits depends on the dimensions of the sides of the capsule.

The opening of a receptacle closed by means of a complete ring 6 may be performed for example by forcing off this ring
45 by means of a suitable tool but when the receptacles have to be opened by hand the ends of the ring 6 are preferably connected by a hook and eye 7, undoing which frees the
50 capsule which can then be easily taken off.

As will be readily seen the present invention can be easily applied to closing all kinds of receptacles among others cylindrical receptacles where there is no internal pressure or
55 when it is slight. It may then be advantageous in certain cases to prevent displacement by sliding to interpose a suitable elastic or slightly plastic ring between the receptacle and the turned in edges of the sides of
60 the capsule.

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

65 1. The combination, with a receptacle, of a capsule arranged to close the mouth thereof

and having downwardly extending walls with portions projecting inwardly into closer proximity to the sides of the receptacle than the general surface of the capsule, and a band surrounding the capsule and compressing the inwardly projecting portions against the sides of the receptacle. 70

2. The combination, with a receptacle, of a capsule arranged to close the mouth thereof and having slitted downwardly extending walls with portions projecting inwardly into closer proximity to the sides of the receptacle than the general surface of the capsule, and a band surrounding the capsule and inclosing the inwardly projecting portions. 75 80

3. The combination, with a receptacle, of a capsule arranged to close the mouth thereof and having slitted downwardly extending walls with edges inwardly rolled into closer proximity to the sides of the receptacle than the general surface of the capsule, and a band surrounding the capsule and compressing the inwardly rolled edges against the sides of the receptacle. 85 90

4. The improved closure for receptacles comprising a capsule arranged to inclose the mouth of a receptacle, an annular band surrounding the capsule, and means for locking the capsule and band against relative slidable movement. 95

5. The improved closure for receptacles comprising a capsule arranged to inclose the mouth of a receptacle, a sealing member between the capsule and the edge of the receptacle mouth, an annular band surrounding the capsule, and means for locking the capsule and band against relative slidable movement. 100 105

6. The improved closure for receptacles comprising a capsule arranged to inclose the mouth of a receptacle, a sealing member between the capsule and the edge of the receptacle mouth, an annular band surrounding the capsule and having its ends separately connected, and means for locking the capsule and band against relative slidable movement. 110 115

7. The improved closure for receptacles comprising a capsule arranged to inclose the mouth of a receptacle, and having slitted downwardly extending walls with inwardly rolled edges, a washer between the capsule and the edge of the receptacle mouth, an annular band surrounding the capsule and confining the inwardly rolled edges of the same against the side of the receptacle, and means for locking the capsule and band against relative slidable movement. 120 125

8. The combination, with a receptacle, having flaring sides, of a capsule arranged to close the mouth of the receptacle and having downwardly extending walls with edges inwardly rolled into closer proximity to the sides of the receptacle than the general surface of the capsule, and an annular band surrounding the capsule and inclosing the in- 130

wardly rolled edges and confining said edges against the side of the receptacle below its larger diameter.

9. The combination, with a receptacle having upwardly flaring sides, of a washer resting upon the edges of the receptacle mouth, a capsule arranged to close the mouth of the receptacle and bear upon the washer, said capsule having downwardly extending contractible walls with edges inwardly rolled into closer proximity to the sides of the receptacle than the general surface of the capsule, and an annular band surrounding the capsule and inclosing the inwardly rolled edges and confining said edges against the side of the receptacle at a point below its larger diameter.

10. The combination with a receptacle having upwardly flaring sides, of a washer resting upon the edge of the receptacle mouth, a capsule bearing upon the washer and having slitted downwardly extending walls with inwardly rolled edges, a separable annular band surrounding the capsule and confining the inwardly rolled edges of the same against the side of the receptacle at a point below its larger diameter, and means for locking the capsule and band against relative slidable movement.

11. The combination with a receptacle having upwardly flaring sides, of a washer resting upon the edge of the receptacle mouth, a capsule bearing upon the washer and having slitted downwardly extending walls with inwardly rolled edges, an annular band surrounding the capsule and confining the rolled edges of the same against the side of the receptacle, and means for locking the capsule and band against relative slidable movement.

12. The improved closure for receptacles, comprising a capsule arranged to inclose the mouth of the receptacle and having a cylindrical body with its walls slitted in the lower portion to form tongues, each tongue having a portion extending inwardly beyond the general surface of the metal and at a distance above the lower edge thereof, and an annular band surrounding the capsule adapted to confine the inward extensions against the side of the receptacle.

13. The improved closure for receptacles, comprising a capsule arranged to inclose the mouth of the receptacle and having a cylindrical body with its walls slitted in the lower portion to form tongues, each tongue having a portion extending inwardly beyond the general surface of the metal and at a distance above the lower edge thereof, and having the extreme lower edge inwardly and upwardly turned, and an annular band surrounding the capsule adapted to confine the inward extensions and the inwardly turned edges against the side of the receptacle.

14. In combination, a receptacle having smooth sides, a capsule with flaring contractible walls arranged to embrace the mouth of the receptacle and provided with inward extensions, and an annular band surrounding the capsule and pressing the inward extensions thereof firmly against the receptacle.

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

FERNAND LALAU.

Witnesses:

H. C. COXE,
G. DE MESTRAL.