

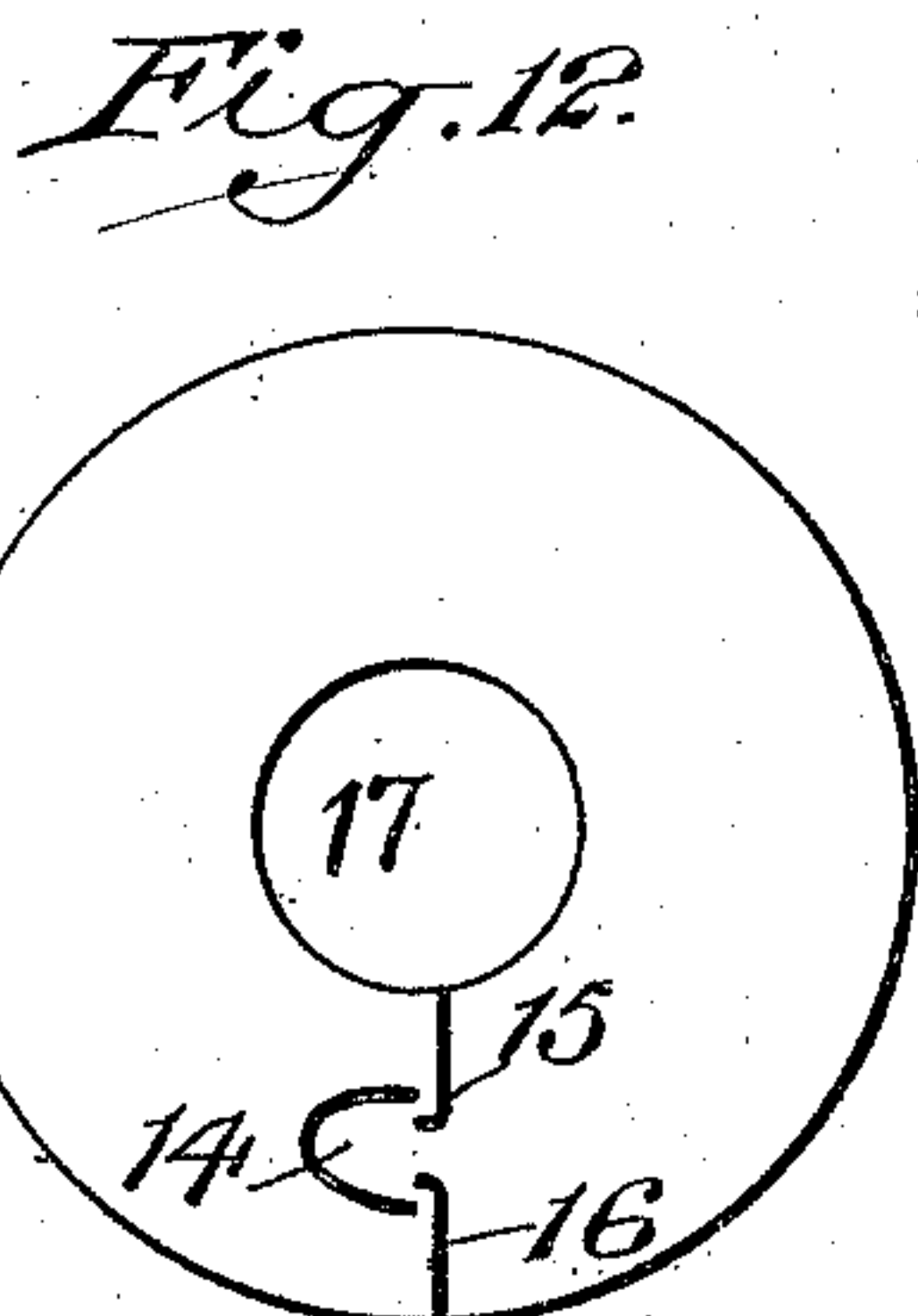
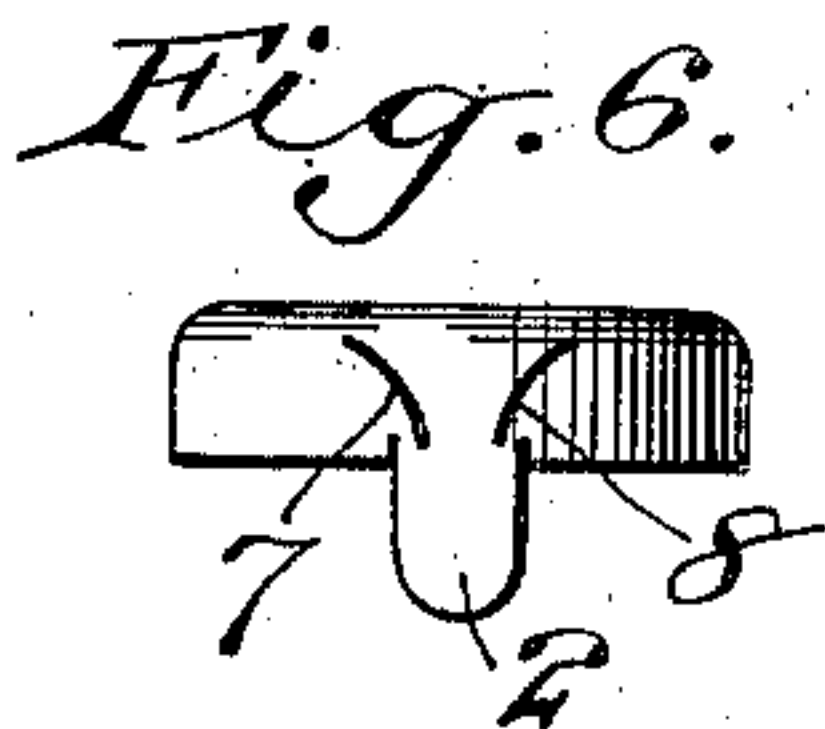
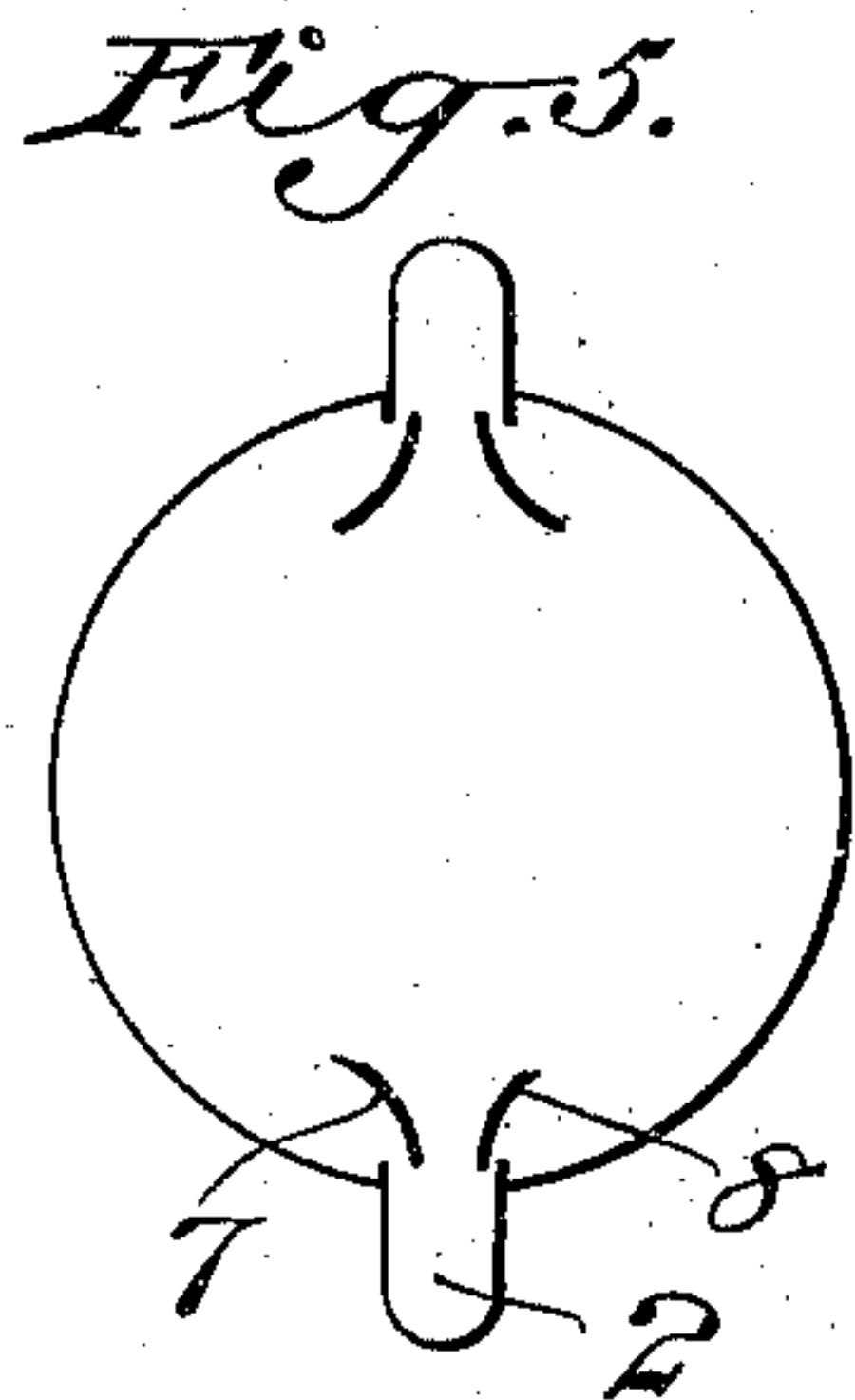
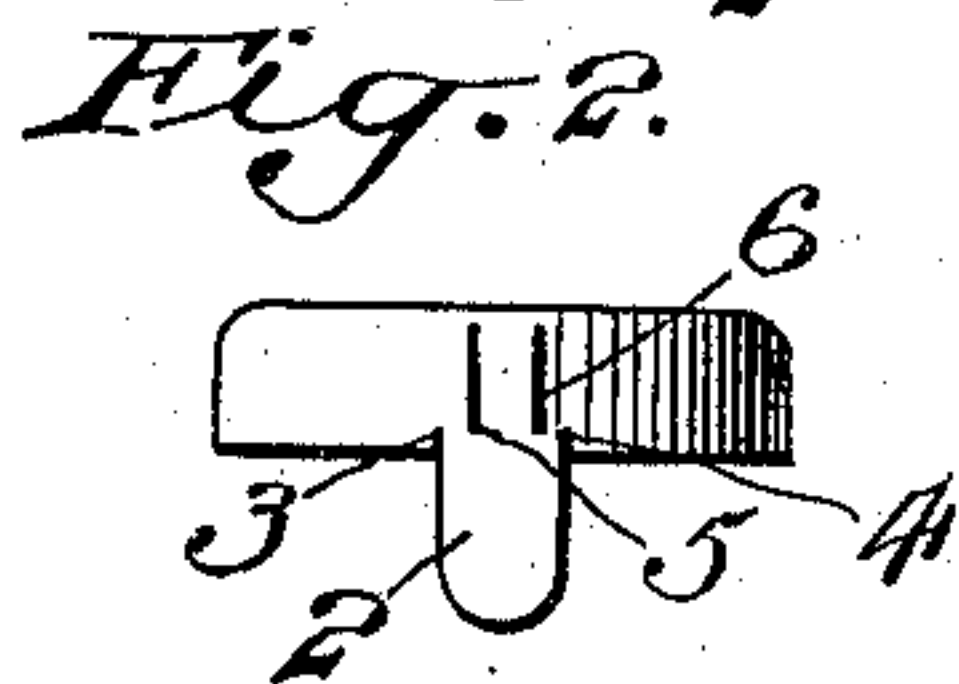
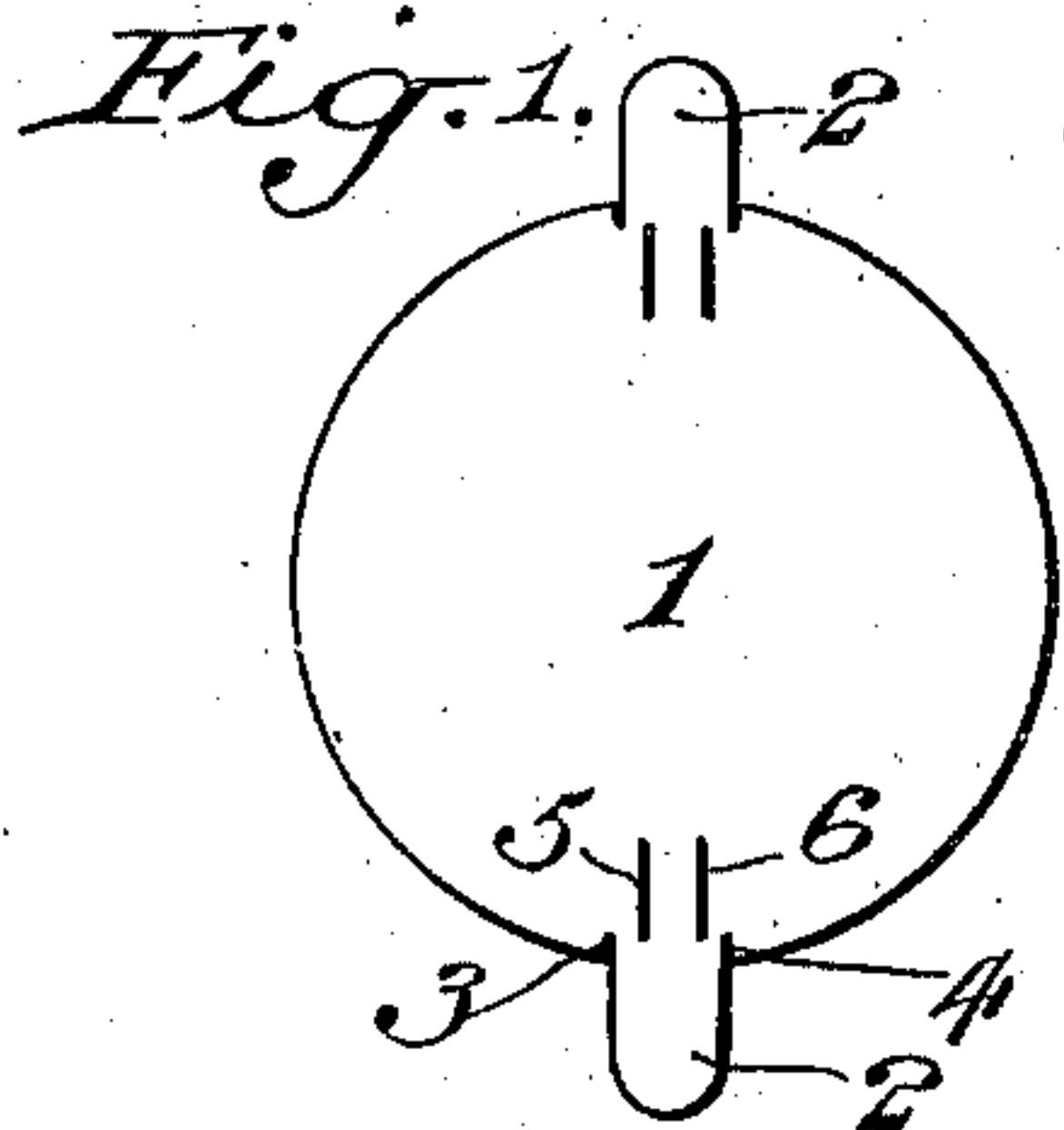
No. 708,528

Patented Sept. 9, 1902.

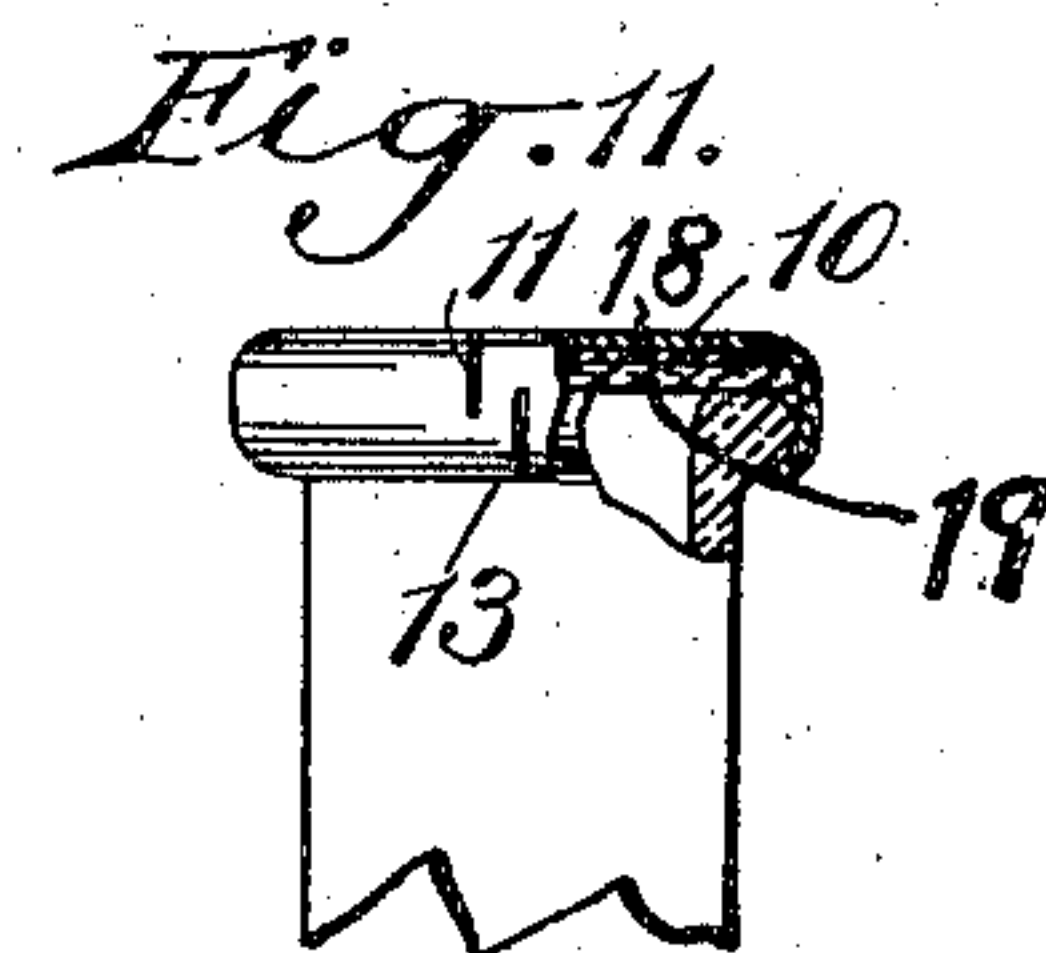
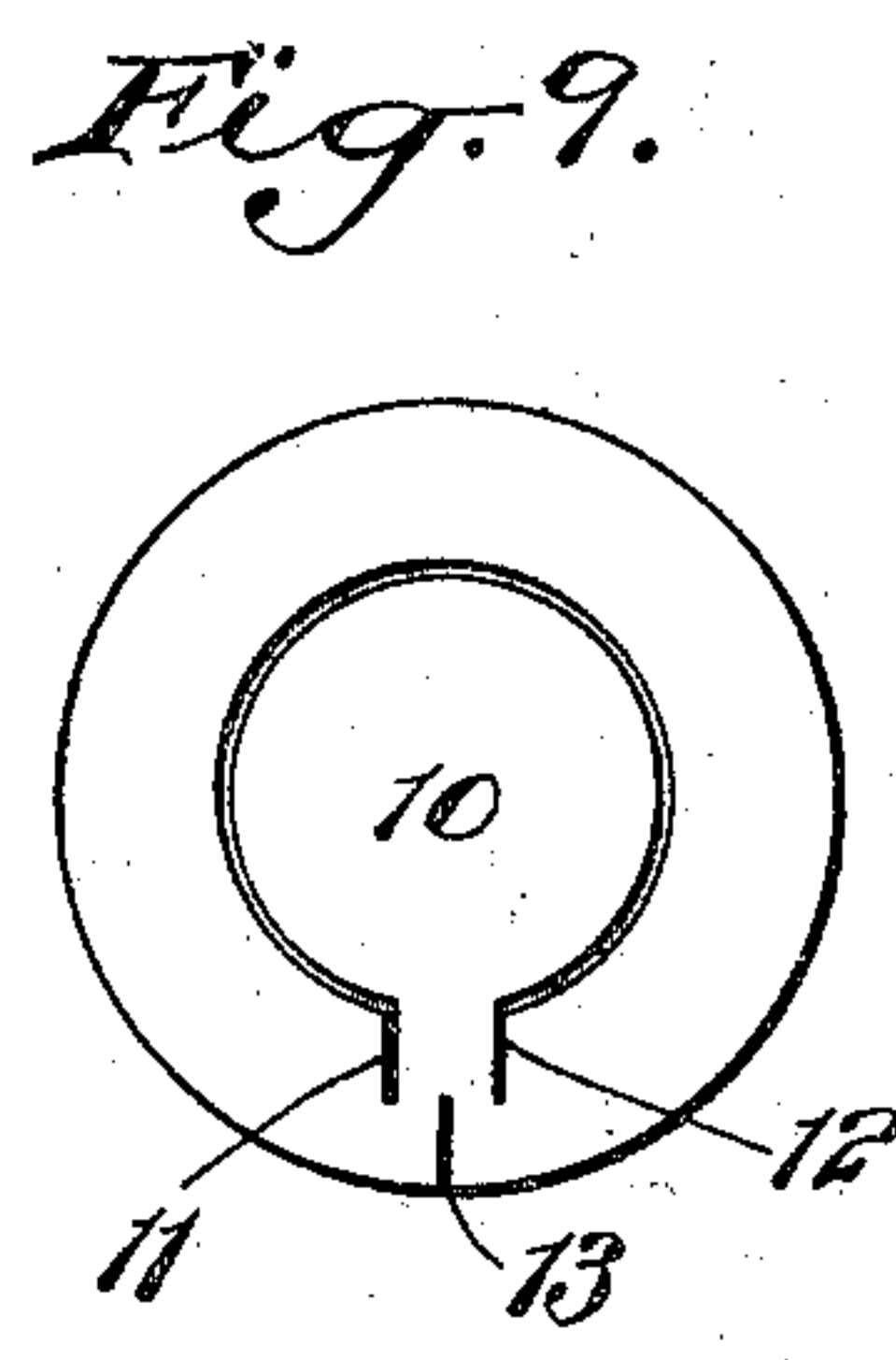
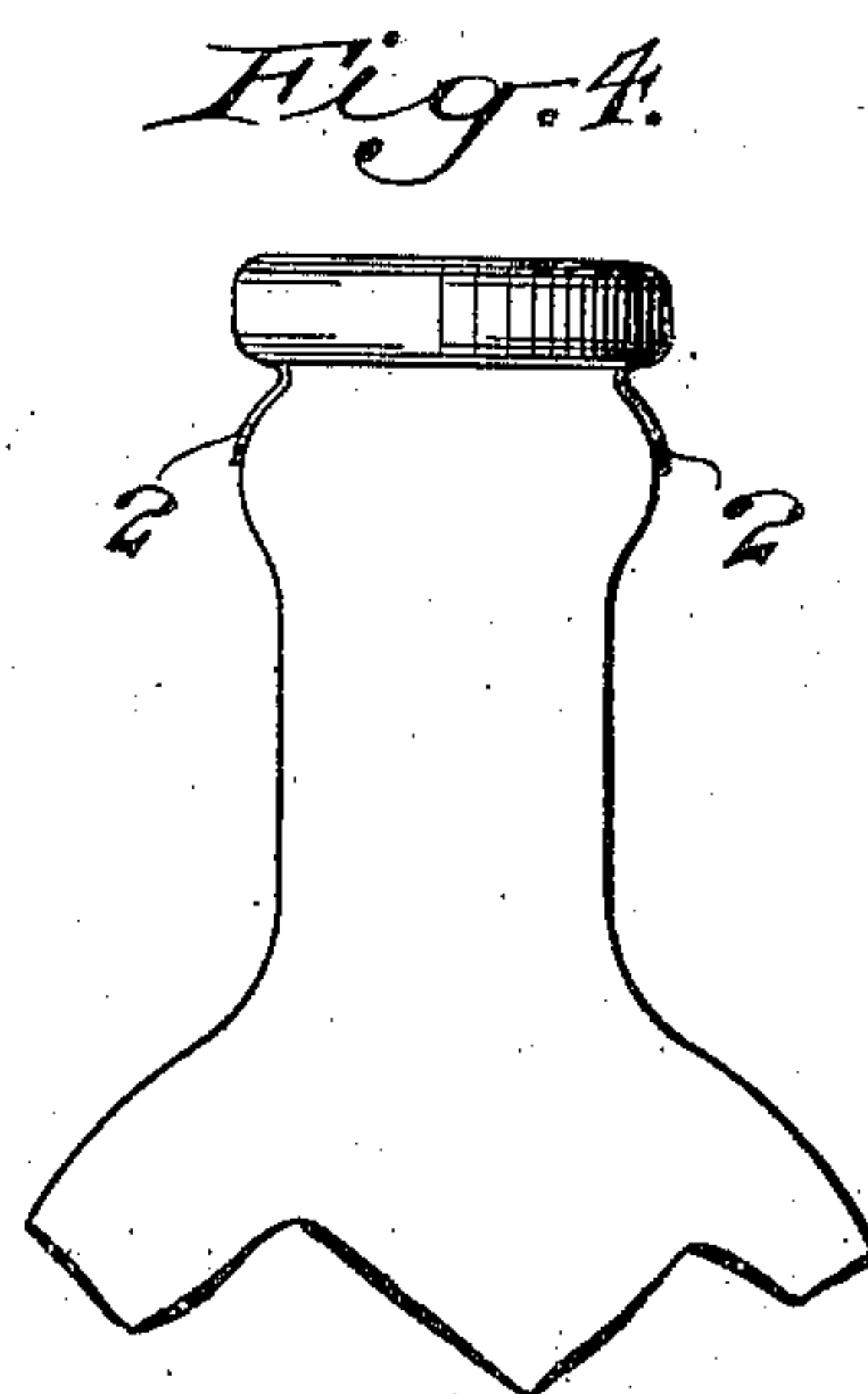
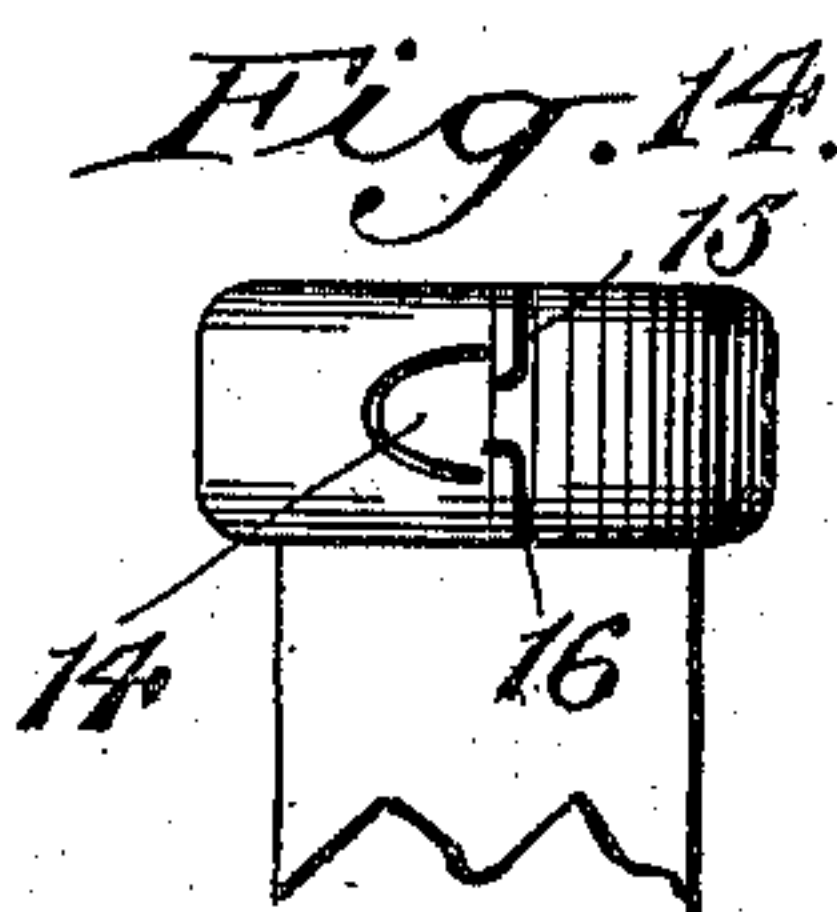
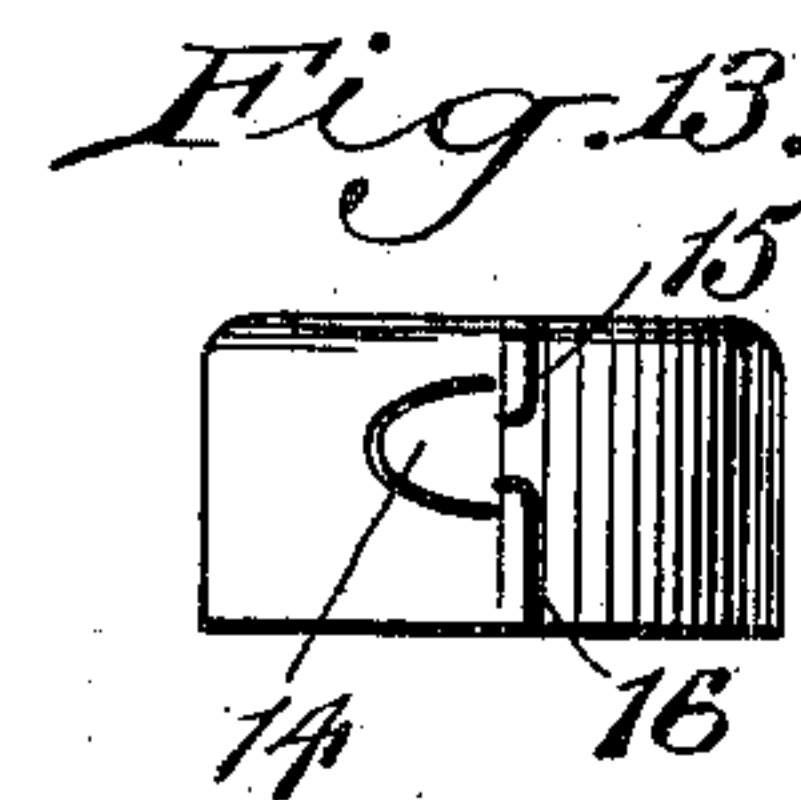
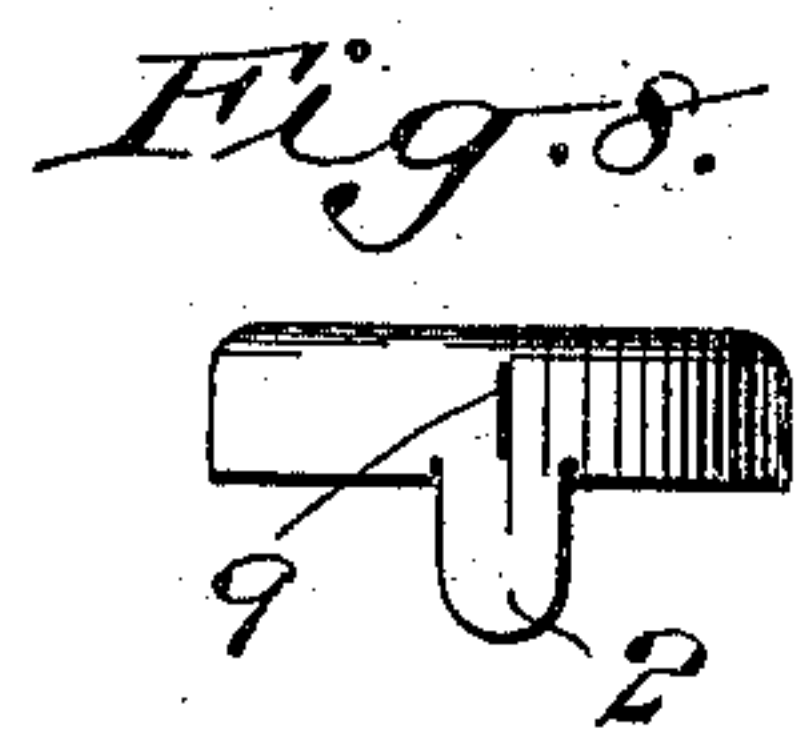
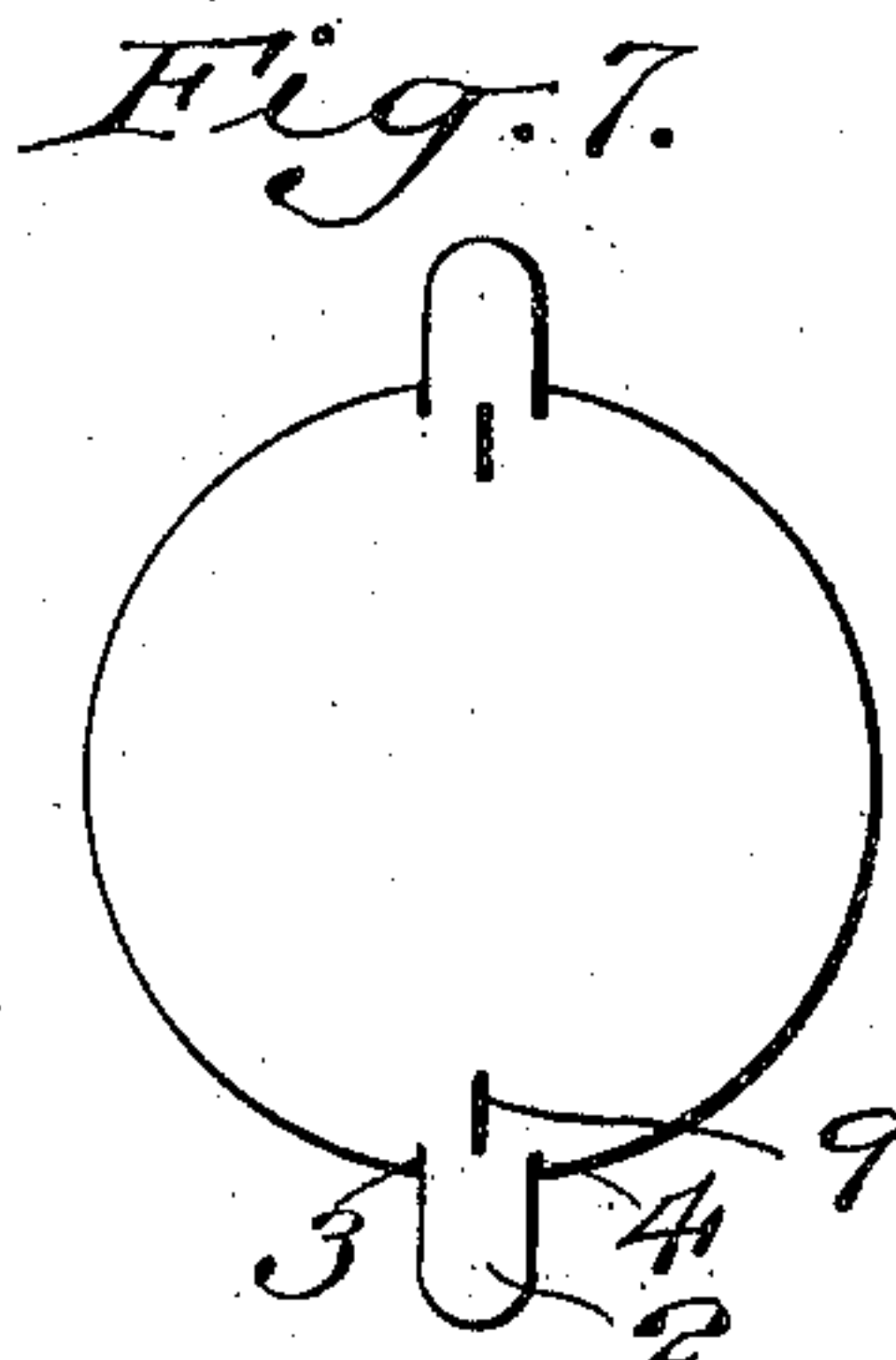
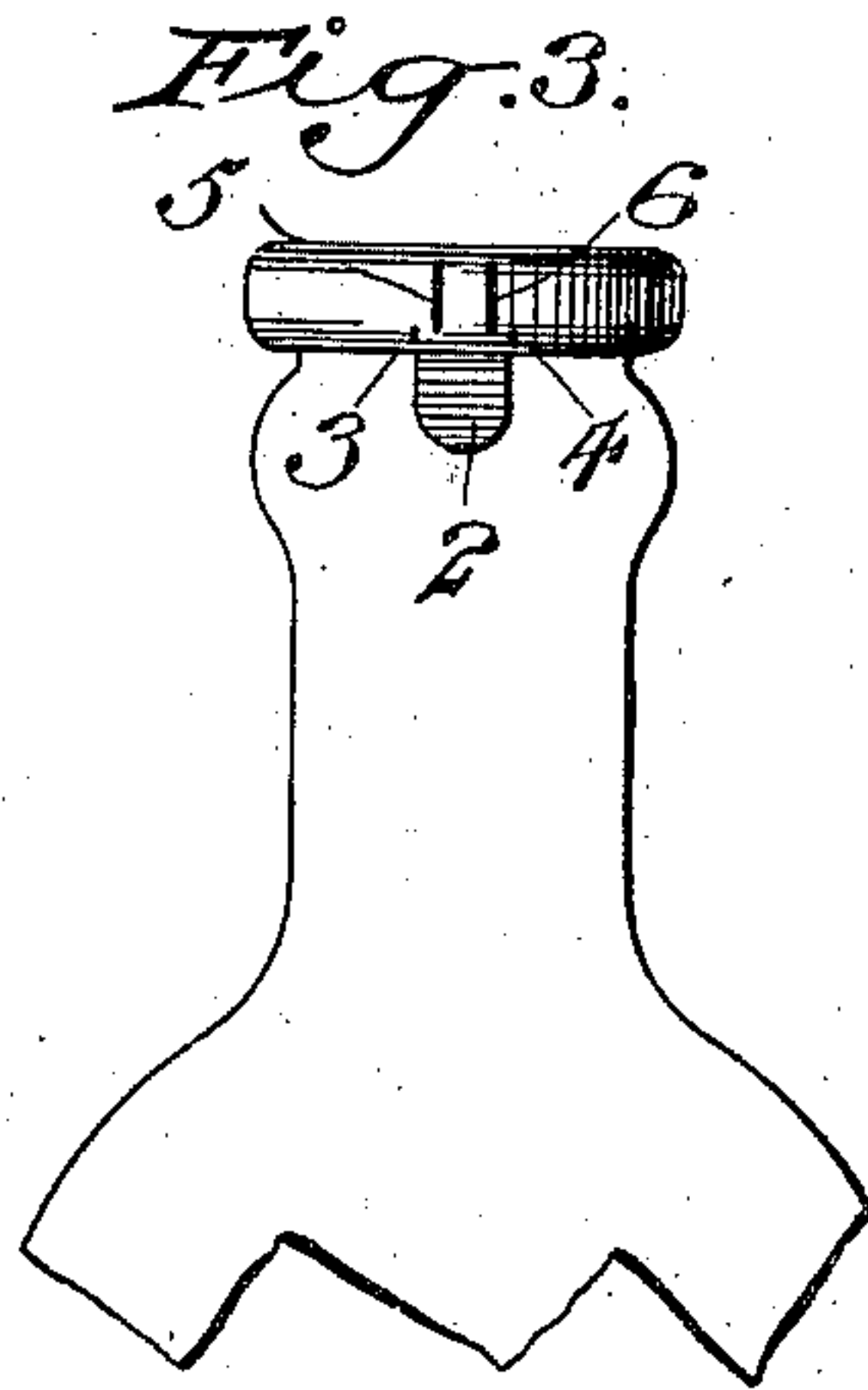
C. A. CALLESON.
METAL CAP FOR BOTTLES OR JARS.

(Application filed Nov. 13, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

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METAL CAP FOR BOTTLES OR JARS.

SPECIFICATION forming part of Letters Patent No. 708,528, dated September 9, 1902.

Application filed November 13, 1901. Serial No. 82,086. (No model.)

To all whom it may concern.

Be it known that I, CHRISTIAN A. CALLESON, a citizen of the United States, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Metal Caps for Bottles or Jars, of which the following is a specification.

My invention relates to an improvement in metal caps for bottles and jars, and has more particularly for its object to provide certain new and useful improvements in the construction and form of metallic caps which are crimped around the neck of the bottle or jar.

A further object is to provide a metal cap of new and improved construction which can be fastened securely to the neck of a bottle or jar to produce a perfect seal and at the same time can be removed at will without the use of an implement.

I am aware that caps have heretofore been devised in which the above object has been sought by providing a weakened portion in the cap which when torn off releases the same from its contact with the bottle-neck. Great difficulty has, however, been experienced in producing a weakened portion which will be sufficiently strong to insure a perfect seal and still weak enough to tear off readily, mostly because it is impossible to obtain sheet metal which will run uniform in thickness and quality. Therefore in order to avoid a large percentage of loss due to leaks the weakened portion is made much stronger, so as to take care of the most unfavorable condition of the metal, with the result that the weakened portion is removed with difficulty. Being aware of the aforesaid difficulties in working sheet metal, a further object is to provide a metal cap of such construction that its usefulness is not impaired by the above-described varying conditions of the sheet metal from which the caps are formed.

The invention consists, essentially, in the novel means employed for severing the flange or side wall of the cap, whereby the same is loosened from its locking engagement with the bottle or jar neck, and to that end a tongue is formed either within the body of the cap or projecting from its side wall or flange, the base of which is located within

the said side wall or flange, and one or more slits extended to the base of the tongue, thus leaving the flange severed except at the base of the tongue, which portion is readily broken at will by bending the tongue outward away from the body of the cap.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents in plan view a metallic cap-blank having two releasing-tongues. Fig. 2 is a side view of the cap before it is crimped upon the neck of a bottle or jar. Fig. 3 is a view of the cap, showing it in its crimped engagement with the neck of a bottle. Fig. 4 is a similar view taken at right angles to Fig. 3. Fig. 5 is a view of a cap-blank, showing the additional slits near the base of the tongue as flaring away from each other to insure a wide break in the cap-flange or side wall. Fig. 6 is a side view of the cap formed from the blank shown in Fig. 5. Fig. 7 is a view of a blank in which a single additional slit is shown instead of the two additional slits shown in Fig. 1. Fig. 8 is a side view of the cap formed from the blank shown in Fig. 7. Fig. 9 is a plan view of a blank in which the tongue is formed in the top of the cap, with its base extended into the side wall or flange and a single additional slit leads from the periphery of the blank to a point between the slits made by the base of the tongue. Fig. 10 is a side view of the cap formed from the blank shown in Fig. 9. Fig. 11 is a side view of the cap, showing it in its crimped position upon the neck of a bottle, a portion of the cap and bottle being broken away to show the interior construction of the same. Fig. 12 is a plan view of a blank, showing the tongue formed near the periphery of the same, so that it will be located entirely in the side wall or flange of the cap when completed, the additional slits being extended from the interior and the periphery of the blank to points intermediate to the points where the tongue is separated from the blank. Fig. 13 is a side view of the cap formed from the blank shown in Fig. 12; and Fig. 14 is a side view of the cap, showing it in its crimped engagement with the neck of a bottle.

In the form shown in Figs. 1 to 4, inclu-

sive, the blank from which the cap is formed is denoted by 1, and it may be made of metal of the desired thickness and strength to permit it to effectually close the mouth of a bottle or jar when crimped thereon. One or more tongues 2—in the present instance two are shown—project from the bottom of the side wall or flange of the cap at points diametrically opposite each other. Slits 3 4 are cut through the bottom of the side wall or flange of the cap and form the base of each of the tongues 2. Two additional slits 5 6 are cut through the flange of the cap in parallel lines adjacent to each tongue, the outer ends of the slits being extended between the slits 3 and 4 at the base of the tongue, so that the body of the metal along the base of the tongue is divided into a plurality of parts—in the present instance three parts—so as to permit a ready breakage of the metal at the base of the tongue when the tongue is swung outwardly away from the cap, thereby severing the flange.

In the form shown in Figs. 5 and 6 the additional slits are denoted by 7 and 8, which slits are cut through the flange of the cap at an angle to each other, so as to weaken a larger portion of the side wall or flange of the cap than where the parallel slits 5 and 6 are used. This form can be used to good advantage in connection with thicker or stronger sheet metal than that used in connection with the form shown in Figs. 1 to 4, inclusive.

In the form shown in Figs. 7 and 8 a single additional slit 9 is formed in the cap-flange adjacent to the tongue 2 and extended between the slits 3 and 4 at the base of the tongue. In this form the body of the metal at the base of the tongue is divided into two parts instead of three, as in the forms hereinbefore described.

In the form shown in Figs. 9, 10, and 11 a single tongue 10 is severed from the top of the cap, which tongue terminates with its base in the flange or side wall of the cap through slits 11 and 12 cut through the cap toward the bottom of its flange. An additional slit 13 is cut through the flange of the cap from the bottom thereof to a point at the base of the tongue 10 between the slits 11 and 12, so as to divide the metal at that point into two parts, so that when the metal is broken at this point a complete separation of the side wall or flange of the cap is insured.

In the form shown in Figs. 12, 13, and 14 the cap has a central hole 17 through its top, which cap is more particularly intended for use in connection with the metal disk 18 and cork 19 shown in Fig. 11. In this form a tongue 14 is cut in the side wall or flange of the cap, and additional slits 15 16 are cut through the body of the metal and extend from the base of the tongue down to the bottom of the side wall or flange of the cap and up to the hole 17 in the top of the cap, thus subdividing the metal at the base of the tongue into three parts, so that when the

metal is broken at the base of the tongue by the tongue being bent outwardly the cap will be released from its crimping engagement with the neck of the bottle. This last form is more particularly applicable for use in connection with bottles or jars in which a cap having a particularly deep side wall or flange is used, while the previously-described forms are more particularly applicable for use in connection with caps having a small side wall or flange for use in connection with bottles or jars having the exterior shoulder in close proximity to the mouth of the bottle or jar.

In the forms above described it will be seen that the cap is released from its crimped engagement with the neck of the bottle or jar by the breaking of the metal at the base of the tongue, whether the tongue projects from the flange of the cap or is struck from the body of the cap itself. This arrangement does away with the necessity of tearing the metal, as has hitherto been done. Very much stronger metal can be used where the release of the cap is dependent upon a breaking of the metal than where the release of the cap is dependent upon the tearing of the same. A very strong but sufficiently brittle metal can be utilized where the breaking of the metal at the base of the tongue separates the side wall or flange of the cap, and it requires a very slight force to release a cap of this character.

It is understood that the tongues and slits may be made in many different shapes and sizes to suit different requirements and that any number of tongues may be employed with their corresponding intermediate slits.

What I claim is—

1. A metal cap for bottles or jars having a tongue, the base of the tongue being formed by slits terminating in the side wall or flange of the cap, and an additional slit in the side wall or flange of the cap extended to a point intermediate the slits which form the base of the tongue whereby the body of metal at the base of the tongue may be broken as the tongue is bent away from the cap, for releasing the side wall or flange from its engagement with the neck of the bottle or jar, substantially as set forth.

2. A metal cap for bottles or jars having a tongue projecting from its side wall or flange, with its base located within the said side wall or flange, and a slit in the side wall or flange leading to a point at the base of the tongue whereby the body of metal at the base of the tongue may be broken as the tongue is bent away from the cap for completely severing the side wall or flange for releasing it from the neck of the bottle or jar, substantially as set forth.

3. A metal cap having a side wall or flange fitted to be clamped to the neck of a bottle or jar and a tongue projecting from the side wall or flange, and a slit through the side wall or flange leading to a point within the base of the tongue whereby the body of metal

at the base of the tongue may be broken as the tongue is bent away from the cap for releasing the side wall or flange from its locking engagement with the neck of the bottle or jar, substantially as set forth.

4. A metal cap for bottles or jars having a tongue, the base of the tongue being formed by slits terminating in the side wall or flange of the cap, and a plurality of additional slits in the side wall or flange of the cap extended to points intermediate the slits which form the base of the tongue whereby the body of metal at the base of the tongue may be broken as the tongue is bent away from the cap, for releasing the side wall or flange from its engagement with the neck of the bottle or jar, substantially as set forth.

5. A metal cap for bottles or jars having a

tongue projecting from its side wall or flange, with its base located within the said side wall or flange, and a plurality of slits in the side wall or flange leading to points within the base of the tongue whereby the body of metal at the base of the tongue may be broken as the tongue is bent away from the cap for completely severing the side wall or flange for releasing it from the neck of the bottle or jar, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 8th day of November, 1901.

CHRISTIAN A. CALLESON.

Witnesses:

FREDK. HAYNES,
HENRY THIEME.