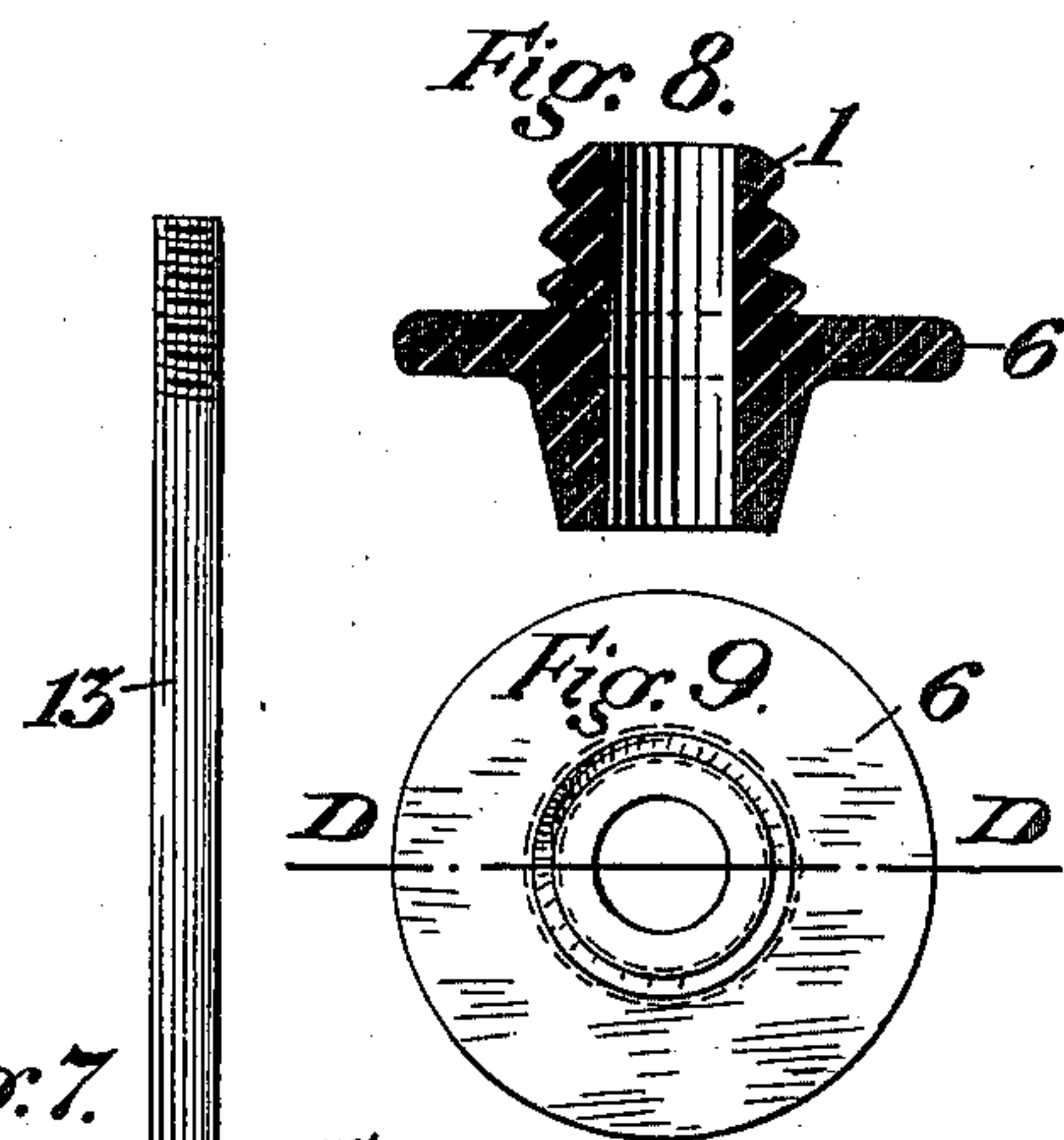
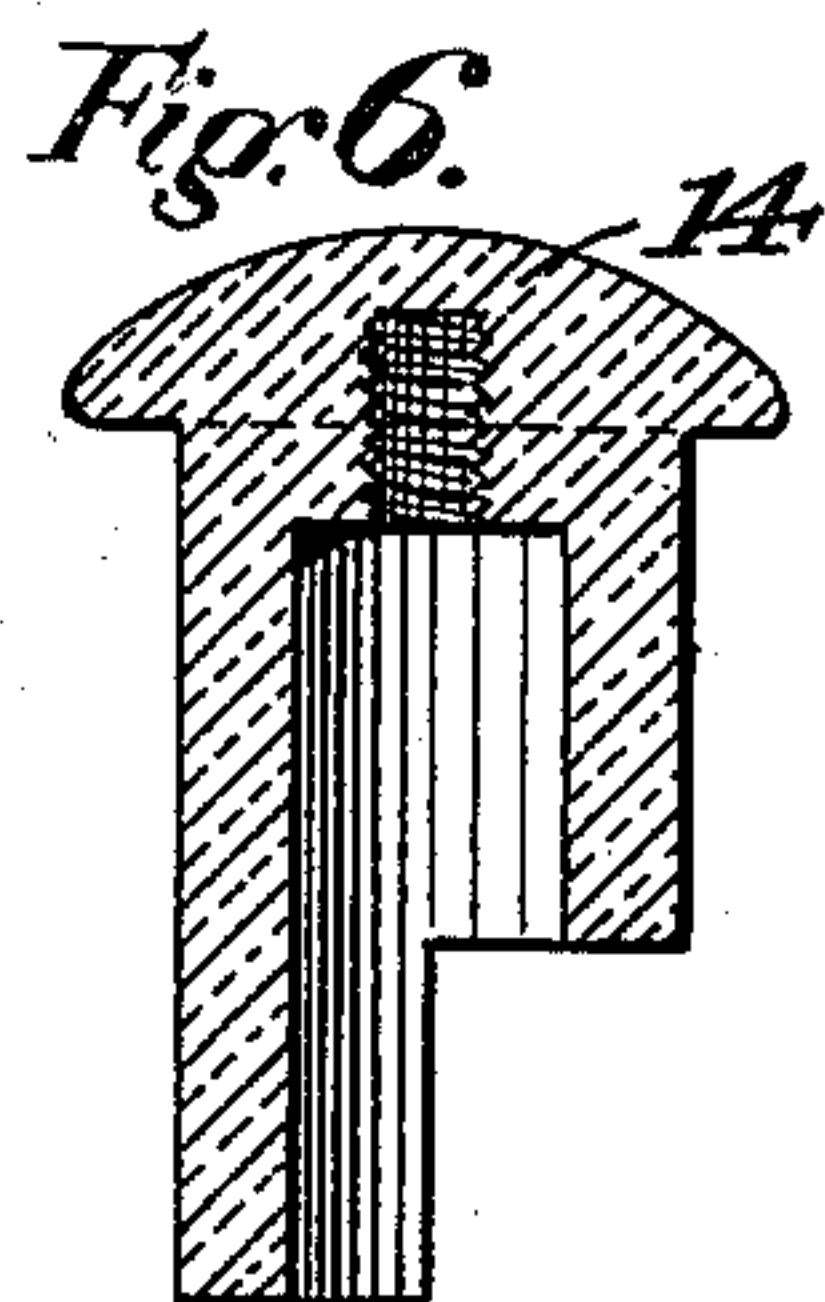
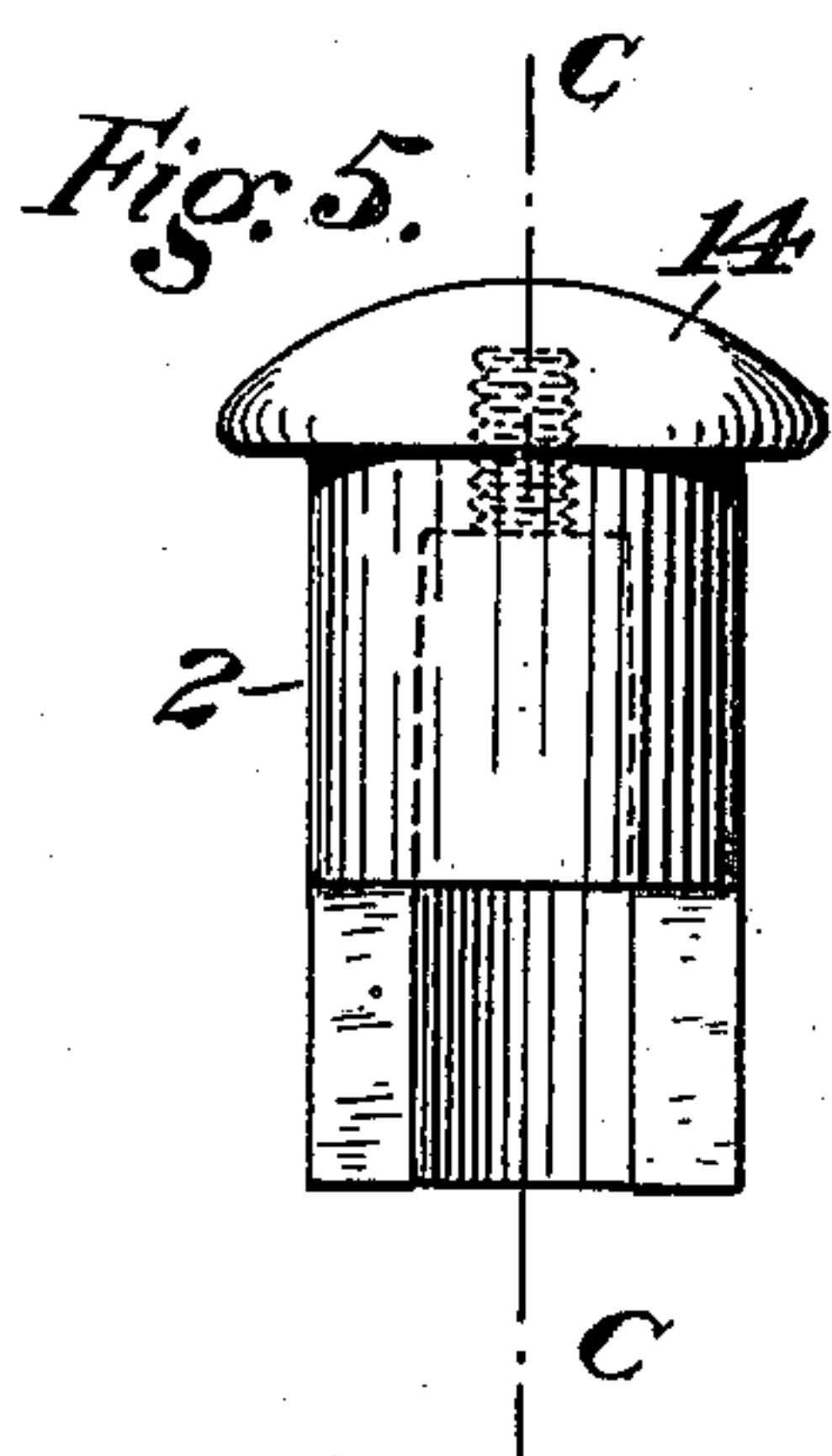
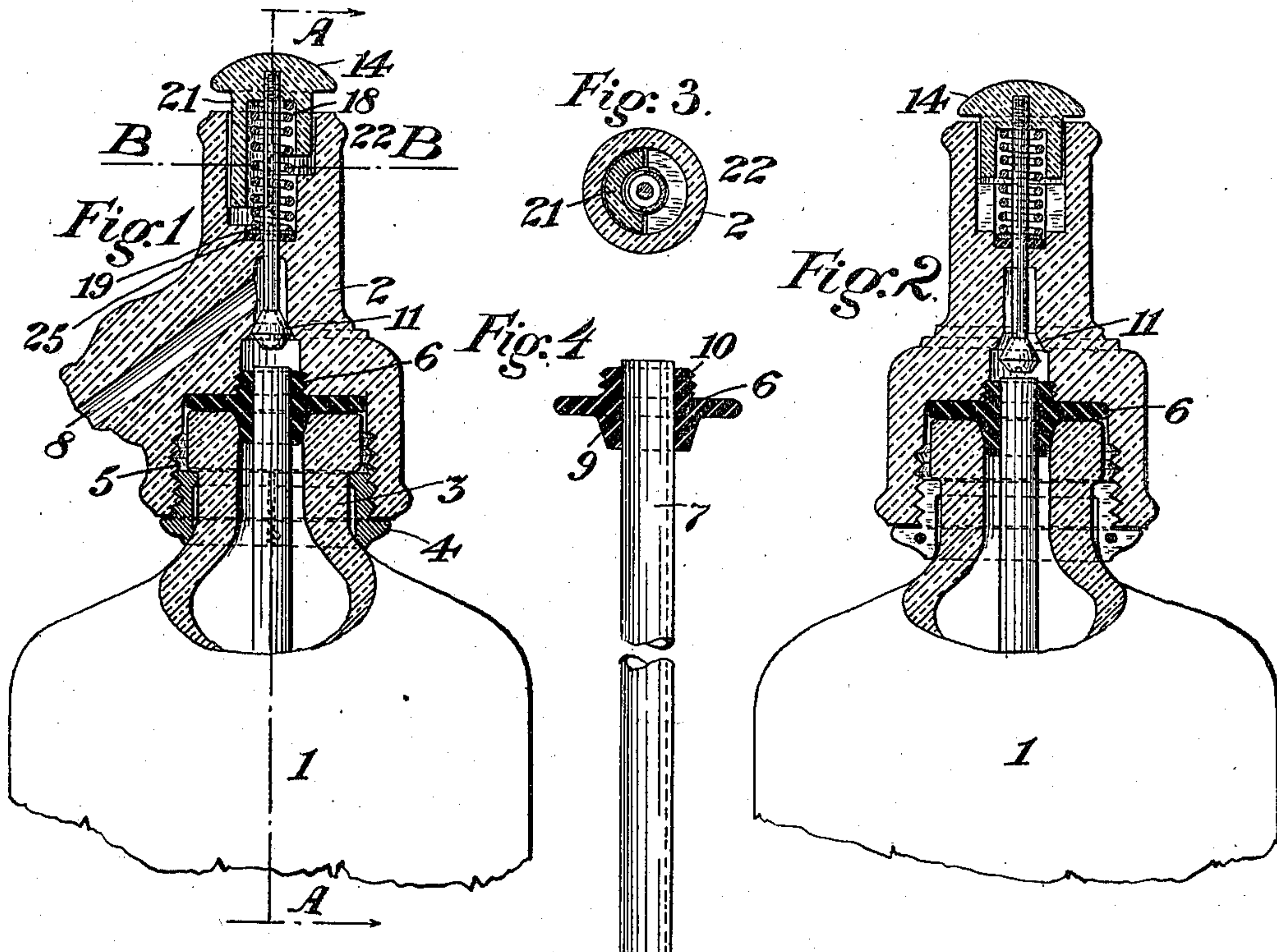


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HYGIENIC SIPHON.
APPLICATION FILED NOV. 9, 1908.

976,244.

Patented Nov. 22, 1910.



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HYGIENIC SIPHON.

976,244.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed November 9, 1908. Serial No. 461,705.

To all whom it may concern:

Be it known that I, ALBERT J. ACKERMAN, a citizen of the United States, and resident of New York, county of New York, State of New York, have invented certain new and useful Improvements in Hygienic Siphons, of which the following is a specification.

The present invention has for its object an improvement in siphons for bottles or the like whereby the same is made thoroughly hygienic and the means by which I produce this result reside particularly in adequate devices for preventing the leakage between the interior of the bottle or other vessel and the external air and also in the character of the material forming the siphon head itself.

In carrying out my invention I usually make the siphon head of porcelain although it may be made of glass or other non-corrodible substance and so far as the virtues of the mechanical features of my invention are concerned they might also be applied to metallic siphon heads.

One feature of my improvements resides in the special means for sealing the top of the bottle or other vessel which I accomplish by means of a rubber gasket having a disk portion lying on the top of the bottle, a plug portion entering the mouth of the vessel and fitting therein, and a screw-threaded portion on the opposite side of the disk adapted to coöperate with a screw thread in the interior of the siphon head.

Another novel feature of my invention consists of a special construction of valve and valve-seat commanding the passage way between the exit from the siphon head and the usual tube extending into the bottle.

Still another feature of novelty is that whereby the push button at the top of the head is prevented from rotary displacement during the operation of the siphon and at other times.

My invention will be understood by reference to the accompanying drawings in which—

Figure 1 is a vertical central section through my improved siphon head and a portion of the top of a bottle to which it is applied, the main valve being closed; Fig. 2 is a similar section taken at right angles to the view shown in Fig. 1, the main valve being open; Fig. 3 is a transverse section along the line B—B in Fig. 1; Fig. 4 is a detail view showing the connection between the

tube in the bottle and the gasket adapted to close the mouth thereof; Fig. 5 is an elevation of the push or press button; Fig. 6 is a vertical section of said button taken along the line C—C in Fig. 5; Fig. 7 is an elevation of the valve rod showing a portion of the valve in section; Fig. 8 is a vertical section of the rubber gasket already mentioned, the section being taken along the line D—D in Fig. 9; and Fig. 9 is a plan of the gasket.

In the drawings, 1 represents a bottle to which the siphon head, 2, is applied. Inclosing the neck, 3, of the bottle is a screw-threaded ring, 4, presenting no novel features and being the usual means of connection at this point. The siphon head 2 is provided internally at its lower end with a screw-thread adapted to engage with a screw-thread 5 adapted to engage with the screw-thread on the ring 4 and thereby make connection between the siphon head and the bottle.

The features thus far described are not essentially different from those which are ordinarily used in connecting a siphon head and the bottle or vessel to which it is applied.

The novelty of the present invention begins with the means for closing hermetically the mouth of the bottle 1. Broadly, these means consist of a gasket, 6, pierced at its center by a perforation adapted to receive the usual tube, 7, which extends down into the bottle and forms a portion of the passage way for the liquid in the bottle on its way to the exit, 8, in the siphon head. The opening in the gasket 6 is made such that the tube 7 fits nicely into it and thus a good connection is formed between the tube and the gasket, which is made air-tight when pressure is applied to the gasket as will presently be described. The gasket is preferably formed in the shape of a disk or plate having a downward extension, 9, forming a plug which enters the mouth of the bottle 1 and is so shaped as to fit closely therein. On the upper side of the disk or plate is a screw-threaded portion, 10, adapted to engage with an internal screw-thread in the interior of the siphon head 2.

It will be seen that when the siphon head is screwed down, an engagement takes place not only between the ring 4 and the screw thread 5, but also between the screw-thread-

ed portion 10 and the interior screw-thread last described, the pitch of the threads being necessarily such that both operations can be performed without injury to the apparatus.

The parts are so proportioned that before the outer screw-thread reaches the limit of its motion along the ring 4 there shall be a sufficient amount of pressure exerted upon the gasket 6 and the parts connected therewith to press the same firmly upon the top of the bottle and also to exert a slight compression toward the center whereby the tube 7 is made to have an air-tight connection with the gasket.

The passage above the top of the tube 7 inside the siphon head 2 is provided with a valve seat, 11, adapted to receive a valve, 12, mounted on the lower end of a valve rod or stem, 13. The said valve rod is provided with a screw-thread at its upper end and adapted to be screwed into the cap of the press button 14, as shown in Figs. 1 and 2. The stem 13 is made of hard rubber and is provided at its lower end with an enlargement, 15, generally pear shaped, such enlargement being surrounded by a soft rubber part, 12, which constitutes the valve proper. The enlargement 15 may be secured to the main stem 13 by screw connection. At the bottom of the enlargement 15 is a slot, 16, for the insertion of a screw driver whereby the stem may be screwed into place in the cap 14.

The enlargement 15 is provided with slots, one of which is shown at 17 and the soft rubber piece 12 is provided with lugs on the inside which enter the said slots and hold the soft rubber piece in place.

It will be seen that owing to the shape of the conical piece 15 and the dimensions of the opening in the bottom of the soft rubber piece 12, it is quite possible to slip the said soft rubber piece into place after the part 15 has been joined to the stem 13 or even in case the two last named parts are made in one piece. Thus, the soft rubber piece may be made to assume its proper position with the lugs entering the slots 17, without the necessity of molding the rubber piece upon the conical enlargement 15.

The stem 13 passes up through a small opening in the siphon head above which it is surrounded by a spiral spring, 18, pressing at one end against the bottom of the cap 14 and at its opposite end upon a metal washer, 19, which rests upon a soft rubber gasket, 25, surrounding the stem 13. The spring serves to hold the press button out in the position shown in Fig. 1 except when the same is pressed down in order to push the valve 12 away from its seat.

The cap 14 is provided with a hollow shank, 21, within which the spring 18 operates and this shank is cut away along half its length so as to form a shoulder corresponding to an internal shoulder 22, near the top of the siphon head. The shoulder 22 occupies practically as much space as is cut away from the shank 21, from which it results that the shank and button when properly put in position are held from rotation, though free to reciprocate vertically. These means of preventing the rotation of the press button are simple and effective and form one of the important features of my invention.

A suitable material for the gasket 6 is soft rubber, although other compressible materials may be used.

I am aware that means for preventing a rotary movement of the button and its shank are known in the art, but I am not aware that the particular means described herein are familiar, and I believe them to be novel.

I claim as my invention:

A valve for siphon heads, comprising a solid portion in form resembling a double cone and a flexible, compressible cover therefor, the solid portion being provided with slots in lines corresponding to the slope of the cone on one side and the cover being provided with cooperating lugs for entering the slots whereby the angular displacement of the cover is prevented.

Signed at New York, in the county of New York, and State of New York, this 6th day of November, A. D. 1908.

ALBERT J. ACKERMAN.

Witnesses:

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GEORGE H. STOCKBRIDGE.