

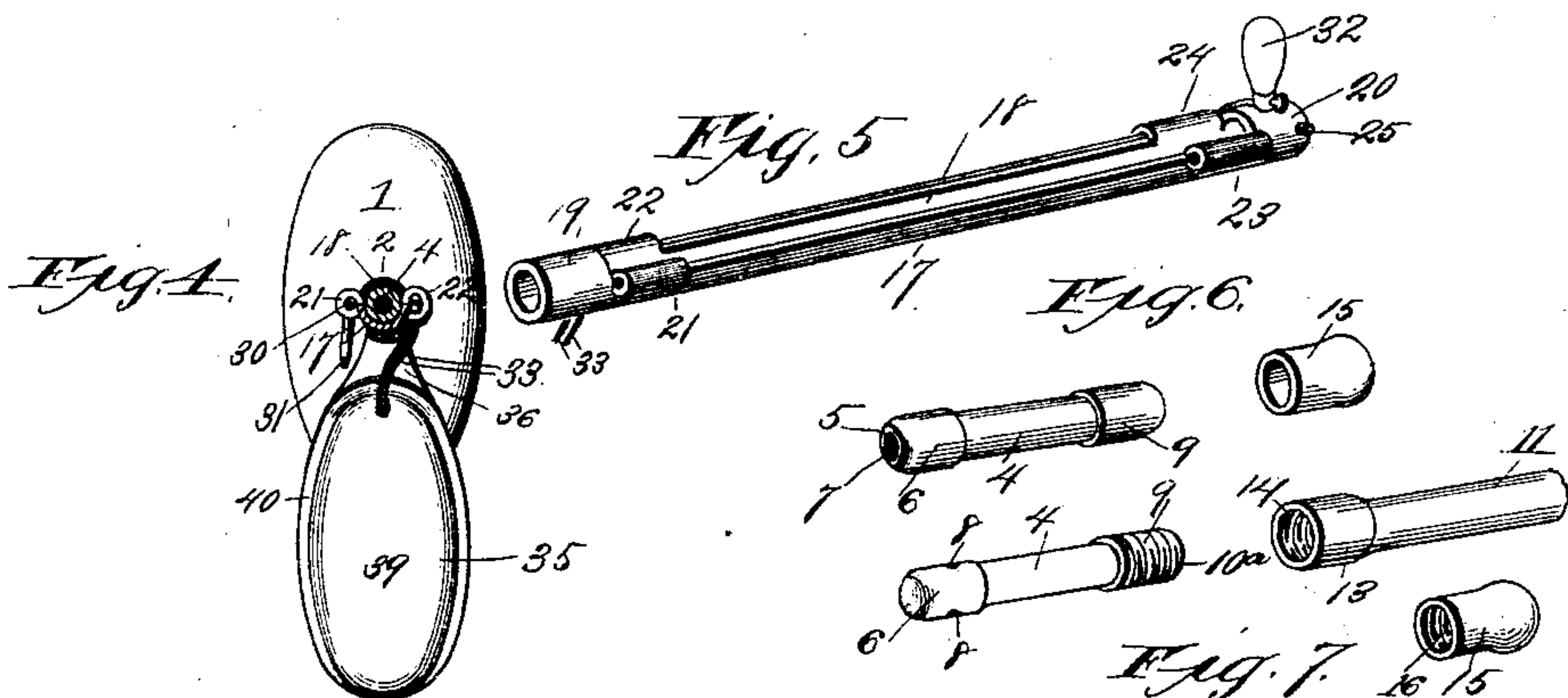
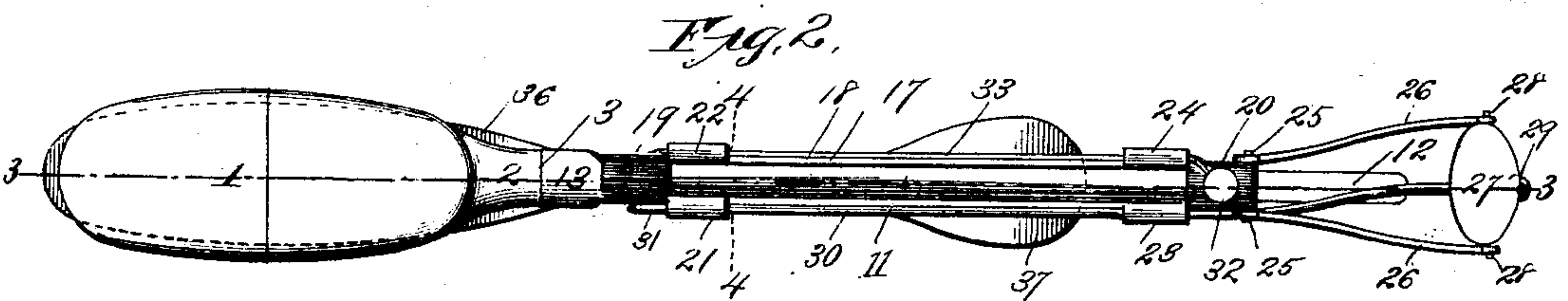
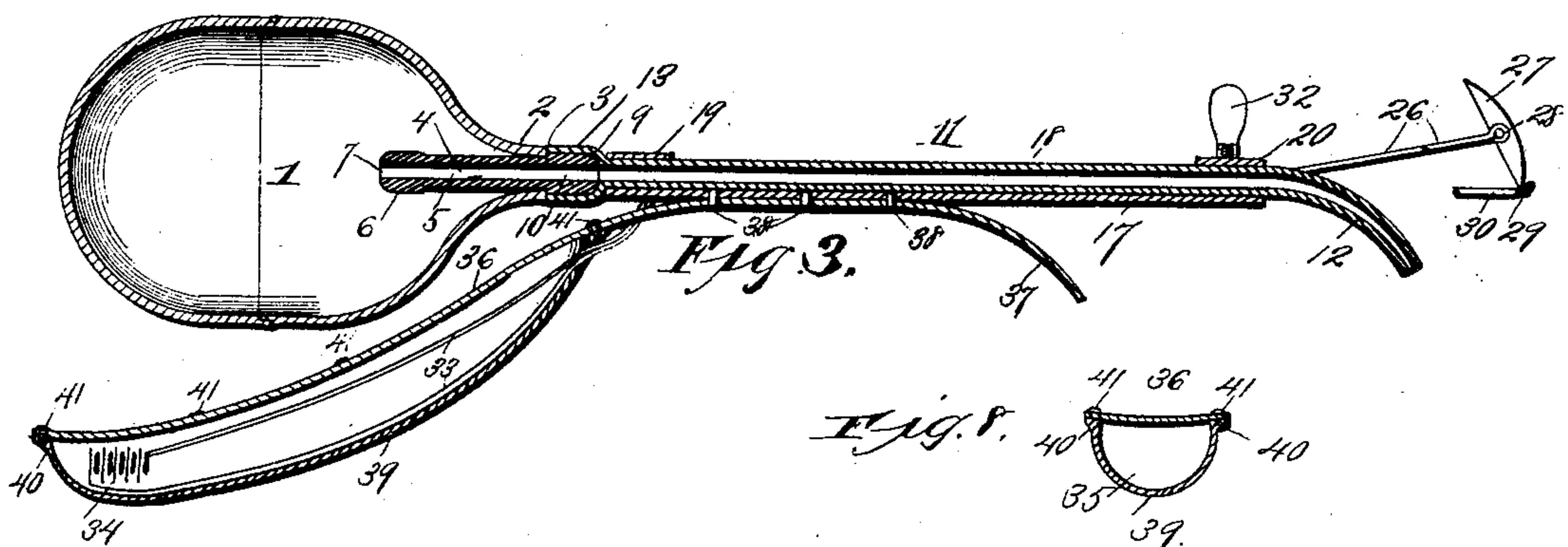
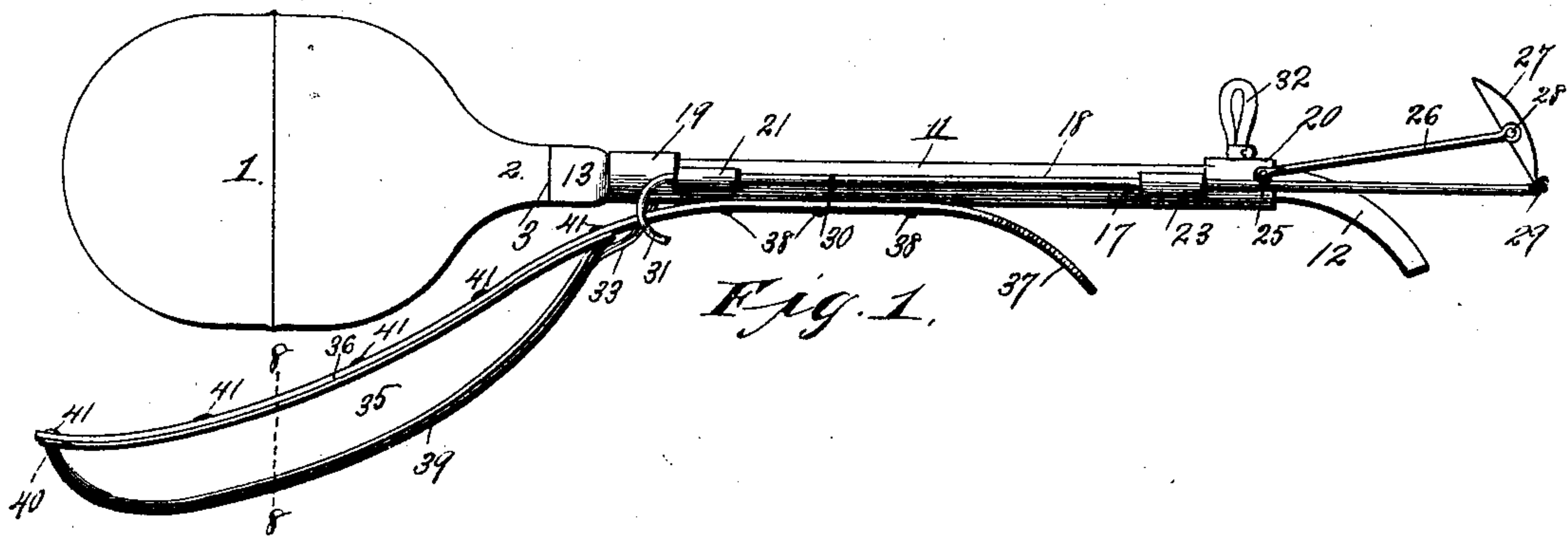
(No Model.)

W. SCOTT.

# INJECTOR OR INSUFFLATOR FOR THE LARYNX, &c.

No. 480,787.

Patented Aug. 16, 1892.



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# UNITED STATES PATENT OFFICE.

WILLIAM SCOTT, OF LEAVENWORTH, KANSAS.

## INJECTOR OR INSUFFLATOR FOR THE LARYNX, &c.

SPECIFICATION forming part of Letters Patent No. 480,787, dated August 16, 1892.

Application filed March 14, 1892. Serial No. 424,797. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SCOTT, of Leavenworth, Leavenworth county, and State of Kansas, have invented certain new and useful  
5 Improvements in Injectors or Insufflators for the Larynx and other Cavities, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 My invention relates to appliances for injecting medicinal substances into the throat, larynx, nasal, and other similar cavities of the human system; and its objects are to produce an injector or insufflator which shall be simple,  
15 durable, and inexpensive in construction, easy to manipulate, and which shall also be so constructed as to be readily carried in the user's pocket.

20 A further object of my invention is to produce an injector the bulb of which shall serve as the receptacle for the medicament, and the bulb of which can also be readily sealed or closed, so as to entirely prevent all waste of the medicament and all deterioration of  
25 the same by contact of the air therewith while the medicament is in the bulb.

30 A further object of my invention is to produce an injector which shall thoroughly illuminate the interior of the throat, larynx, or other cavity, so that the medicament may be applied directly to the mucous membranes or other surfaces affected.

35 A still further object of my invention is to provide an injector which shall reflect an image of the interior of the cavity to the eyes of the operator, and thus further insure the direct application of the medicament to the parts affected.

40 To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

45 In order that my invention may be fully understood I will proceed to describe it with reference to the accompanying drawings, in which—

50 Figure 1 is a side elevation of an injector or insufflator embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal section of the same on the line 3 3 of Fig. 2. Fig. 4 is a transverse section of the same on the line 4 4 of Fig. 2. Fig. 5 is a

detached perspective view of the sheath for the injector-tube and its bearings and incandescent light. Fig. 6 comprises detached perspective views of the plug for the bulb of the injector and the cap for said plug. Fig. 7  
55 comprises a detached perspective view of a modified form of the plug of the bulb of the injector, a modified form of the cap for closing said plug, and of the end of the injector-tube which is to be connected to the plug. Fig. 8 is a transverse section of the injector-handle on the line 8 8 of Fig. 1.

In the said drawings, 1 designates the bulb  
60 of the injector, the said bulb being preferably formed of elastic vulcanized rubber or permissibly of other elastic material. In order to the more perfectly adapt the bulb to be conveniently carried in the user's pocket, the  
70 bulb 1 is preferably of approximately oval or elliptical form, the marginal curves of the oval or ellipse extending from end to end of the bulb. The bulb is furthermore flattened, so as to resemble in its general form a pocket-  
75 flask. It is to be understood that this is the preferred form of the bulb, inasmuch as it enables said bulb to be carried in the pocket without inconvenience to the user; but it is also to be understood that the bulb may be  
80 of spherical or similar form without departing from the essential spirit of my invention. In any event the bulb 1 is formed at one end with a short neck 2, having at its outer extremity a circular mouth 3.

85 4 designates a short cylindrical tube or plug which is designed to be inserted into the mouth and neck of the bulb and which may be either of metal, hard rubber, celluloid, or other suitable or preferred material. The  
90 bore or channel 5 of this plug or tube 4 extends longitudinally of the same, and upon the inner end of this plug or tube is formed or suitably secured an enlargement 6. This enlargement is located within the bulb 1  
95 when the plug or tube 3 is in proper position and serves to prevent accidental detachment of the plug or tube from the bulb, the outer end of the enlargement being closely embraced by the inner end of the neck 2. As  
100 shown in Figs. 3 and 6, the longitudinal channel 5 opens out of the inner end of the enlargement 6, and thus communicates with the interior of the bulb 1. In Fig. 7 this enlarge-



ment is shown as closed at its inner end and as provided with two lateral orifices 8, which communicate at their inner ends with the inner ends of the channel 7 and at their outer ends with the interior of the bulb 1. At its outer end this tube or plug is formed with an enlargement or head 9, having a longitudinal channel, and the outer surface of this enlargement is either left smooth, as shown in Figs. 3 and 6, or said outer surface is screw-threaded, as at 10<sup>a</sup> in Fig. 7. 11 designates the injector-tube of the device, said tube being of metal, hard rubber, celluloid, or other suitable material, and of any desired length, according to the dimensions of the particular cavities to be treated. At its outer end the tube 11 is preferably formed with an extension 12 of laterally-curved form, so as to insure direct application of the medicament to the precise surfaces affected, the said extension being of metal, hard rubber, celluloid, or other suitable material, and also either formed integrally with the outer end of the tube 11, as shown, or suitably attached thereto, as preferred. At its opposite or inner end the tube 11 is formed with a cylindrical enlargement 13, said enlargement being either smooth internally, as shown in Fig. 3, or screw-threaded internally, as shown at 14 in Fig. 7. In the first instance the cylindrical enlargement 13 is designed to engage frictionally with the plain outer surface of the enlargement or head 9, (shown in Figs. 3 and 6,) and in the latter instance the internal screw-threads 14 of the enlargement or head are designed to engage the external screw-threads 10 of the enlargement or head 9. (Shown in Fig. 7.) In either event it will be seen that the tube 11 is detachably connected to the plug 4, and the intention is to detach the tube 11 from the plug when the instrument is not in use. In such case the outer end of the plug 4 is closed by a cap 15, which is either of elastic or hard rubber, or of metal, celluloid, or of any other suitable or preferred material. As shown in Fig. 6, the inner end of this cap is perfectly smooth or plain, and is adapted to frictionally engage the plain outer surface of the head or enlargement 9, (shown in said figure,) while in Fig. 7 the inner end of the cap 15 is shown as provided with an internal screw-thread 16, which is adapted to engage the external screw-thread 10 of the head or enlargement 9. (Shown in Fig. 7.) In either event it will be seen that when the cap 15 is applied the outer end of the plug or tube 4 is hermetically sealed, so that the contents of the bulb 1 cannot possibly escape therefrom, nor such contents be liable to deterioration by contact with the air.

The injector-tube 11 is partially surrounded by a sheath or casing 17, which is of sheet metal or other suitable or preferred material and which corresponds in length with the injector-tube 11. On its upper side the casing or sheath 17 is formed with a longitudinal opening or slot 18 and at its inner and outer

ends, respectively, with tubular portions 19 and 20, which surround the corresponding end portions of the injector-tube 11. At its inner end this sheath or casing 17 carries two oppositely-disposed tubular guides 21 and 22 and at its outer end two similar guides 23 and 24, each of these four guides being formed contiguous to one margin of the slot 18 near one end of the same. At opposite sides of the outer end 20 of the sheath or casing 17 are formed two oppositely-disposed outwardly-extending studs 25, and upon said studs are secured the inner ends of two arms 26. These arms 26 extend obliquely upward and outward from the studs 25 and carry between their outer ends a mirror 27. This mirror is pivoted between the said arms by means of two studs 28, which project outwardly from opposite sides of the mirror and which are surrounded by the outer ends of the arms 26.

To the bottom of the mirror 27 is pivotally secured, as at 29, the outer end of a rod or wire 30, the said wire passing longitudinally of the sheath or casing 17 and tube 11, and also working through the two guides 21 and 23. The inner end of this rod is formed or otherwise provided with a hook 31, the arrangement being such that the rod 30 can be pulled and pushed longitudinally, so as to tilt the mirror 27 on its studs 28, and thus bring the mirror into precisely the position required to properly reflect the image of the surface to be treated.

Upon the end 20 of the sheath or casing 17 is secured an incandescent lamp, from which lead wires 33, said wires extending longitudinally of the tube 11 and sheath 17, and also through the guides 22 and 24. The rear ends of these wires are connected to the positive and negative poles of a battery 34, which is located within the handle 35 of the instrument, this battery being of any suitable or preferred type of storage or generating battery. The top 36 of this handle is prolonged forwardly, so as to extend beneath the sheath or casing 17, and also is expanded laterally and curved slightly downward at its front end, so as to form a tongue-rest 37 for properly depressing the tongue when the instrument is being used in the throat or larynx. The top 36 and rest 37 are secured to the sheath or casing 17 by rivets 38 or equivalent appliances, which pass between the rest 37 and top 36 and into the under side of the sheath or casing 17, as shown. The bottom 39 of the handle and battery-receptacle is formed at its margin with a continuous flange 40, which is overlaid by the marginal portion of the top 36, screws 41 or equivalent devices being used to connect the bottom 39 detachably to the top. It will thus be seen that I have produced an injector which is simple, durable, and inexpensive in construction, readily manipulated in applying medicament to the throat, larynx, or other similar cavities of the human system, and also portable and capable of retaining the medicament



in its bulb without liability of wasting the same or of deterioration of the medicament by contact with the air.

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

1. An injector for the throat, larynx, &c., comprising a bulb of elongated and flattened form, substantially as set forth.

10 2. An injector for the throat, larynx, &c., comprising a bulb, a plug having enlarged inner and outer ends and inserted into said bulb, and a rigid tube surrounding at its inner end the outer end of the plug and having  
15 a laterally-curved outer end, substantially as set forth.

3. An injector for the throat, larynx, &c., comprising a casing for surrounding the tube of the instrument, a mirror pivotally attached  
20 to said casing, guides located at the sides of said casing, a rod running through one set of said guides and connected to the mirror, and

also having a projecting inner end, an incandescent light carried by the outer end of the casing, conducting-wires leading from said  
25 light and through the opposite guides upon the casing, and a hollow handle carried by the casing and designed to contain a battery for connection to the wires, substantially as set forth.

4. An injector for the throat, larynx, &c., comprising a casing for surrounding the injector-tube, a hollow battery-holding handle having its top secured to the under side of the injector-tube casing, and a projection of  
35 the top of the casing extending downwardly, forwardly, and laterally and forming a tongue-rest, substantially as set forth.

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

WILLIAM SCOTT.

Witnesses:

H. E. PRICE,

JNO. L. CONDRON.