

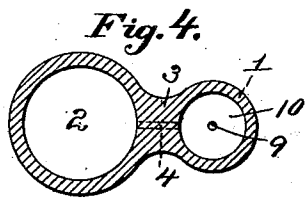
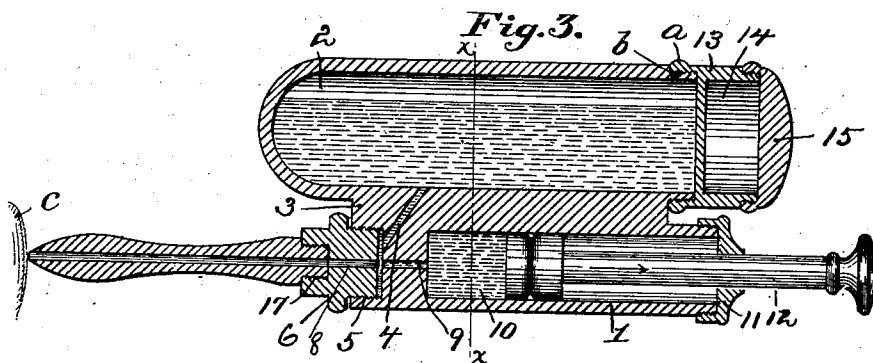
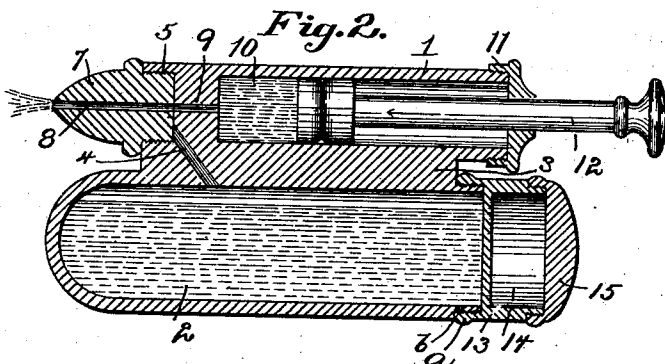
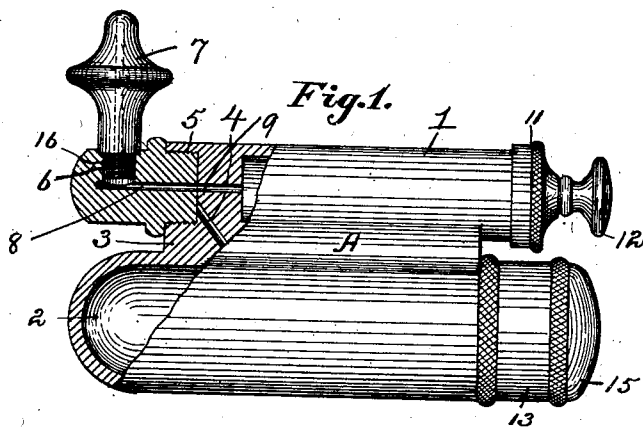
No. 708,224.

Patented Sept. 2, 1902.

F. C. GUNDLACH & W. R. LUDEWIG.
SYRINGE.

(Application filed Oct. 18, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK C. GUNDLACH AND WILLIAM R. LUDEWIG, OF PITTSBURG, PENN-
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SYRINGE.

SPECIFICATION forming part of Letters Patent No. 708,224, dated September 2, 1902.

Application filed October 18, 1901. Serial No. 79,134. (No model.)

To all whom it may concern:

Be it known that we, FRANK C. GUNDLACH and WILLIAM R. LUDEWIG, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Syringes, of which improvement the following is a specification, reference being had therein to accompanying drawings, in which—

Figure 1 indicates an elevation, partly in section, of our improved combined syringe, reservoir, and tablet-receptacle. Fig. 2 is a longitudinal central section of the same, showing position of the device when discharging liquid. Fig. 3 is a longitudinal central section of same with nasal attachment applied and showing position of the device when the syringe is being charged, and Fig. 4 is a transverse section on line *x x* of Fig. 3.

Our invention relates to a combined syringe, reservoir, and tablet-receptacle; and our object is to produce a combined device of this character adapted to be carried in the vest-pocket.

Another object of our invention is to produce a device of this character in which communication between the syringe and reservoir may be controlled—*i. e.*, in which the communication between the two can be prevented or permitted at the pleasure of the operator. By our improved device the operator is enabled to charge the syringe and after the same has been charged cut off communication between the syringe and the reservoir. By this means the syringe is never charged or partially charged excepting when it is desirable to use the same. This feature prevents leakage into the pocket.

Our invention further consists in the novel construction and arrangement of parts hereinafter set forth, reference being had to the accompanying drawings, in which like reference characters indicate like parts wherever they occur throughout the several views.

Referring to said drawings, A indicates the combined device, which is formed of an integral piece of hard rubber or other suitable material and comprises the syringe 1 and the reservoir or receptacle 2, both of which are connected by a rib 3, longitudinally thereof,

and are adapted to intercommunicate by means of the passage or channel 4, one end of which terminates in the inner end of the threaded recess or socket 5, formed in the outer end of the syringe, the said recess being threaded internally to receive an externally-threaded plug 6 or nozzle 7, adapted to be screwed tightly into said recess or socket, whereby the channel or passage 4, communicating between the syringe and the reservoir, is tightly closed or sealed and the liquid contained in the reservoir prevented from being drawn, discharged, or admitted into the syringe. The said plug and nozzle are provided with centrally-disposed orifices 8, respectively adapted to be brought into direct alignment with the fluid admission and discharge opening 9 of the syringe, which communicates with the liquid-chamber 10 thereof, in which the piston 12 is seated. The outer end of the said chamber 10 is closed by a cap 11. The outer end of the reservoir 2 is also closed by a cap 13, in which is formed a shallow compartment 14 for the reception of tablets or other medicine and is closed by a threaded cap 15. The lower threaded flange *a* of said cap controls the vent *b* in the wall of said reservoir 2, which when exposed is adapted to facilitate the discharge of liquid from the reservoir to the syringe.

In Figs. 1 and 3 are shown two different forms of plugs. In Fig. 1 the plug is provided with a vertical orifice 16, internally threaded to receive the externally-threaded lower end of the nozzle, which may be used for application to the ear or nose. In Fig. 3 the plug is provided with a centrally-disposed threaded socket 17 to receive the threaded end of a long nozzle.

The operation of our apparatus is as follows, viz: When it is desired to fill the syringe, the device is held in the position indicated in Fig. 3, *i. e.*, the reservoir 2 being uppermost, the finger *c* being applied to seal the opening in the end of the nozzle the plug 6 is unscrewed sufficient to form a small chamber in the bottom of the socket and between the bottom of the same and the inner end of the plug at the same time exposing the channel or passage 4 which establishes communication between the syringe

and the reservoir; a portion of the contents of the reservoir is thus permitted to be drawn into the syringe until a sufficient quantity has been received and admitted into the chamber 10 of the syringe, the operator then by screwing the plug tight into the socket closes communication between the syringe and reservoir and by removing his finger or unsealing the orifice in the nozzle the contents of the syringe may be discharged therethrough as shown in Fig. 2.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a device of the character herein described, the combination of a syringe and a reservoir, one end of the syringe terminating in a socket having a centrally-disposed channel communicating with the interior of the syringe, and a channel near the edge thereof communicating with the reservoir, and a nozzle having an orifice in alinement with the

central channel in the bottom of the socket and adapted, when tightly seated in the socket, to close the channel between the socket and the reservoir.

2. In a device of the character herein described, the combination of a syringe, a reservoir and tablet-receptacle, one end of the syringe terminating in a socket adapted to communicate with the reservoir and the liquid-chamber of the syringe, in combination with a plug seated in said socket and adapted to control the means of communication between the socket and reservoir.

In testimony whereof we have hereunto signed our names in the presence of two subscribing witnesses.

FRANK C. GUNDLACH.
WILLIAM R. LUDEWIG.

In presence of—

CLARENCE A. WILLIAMS,
JAMES C. HERRON.