

Dec. 10, 1929.

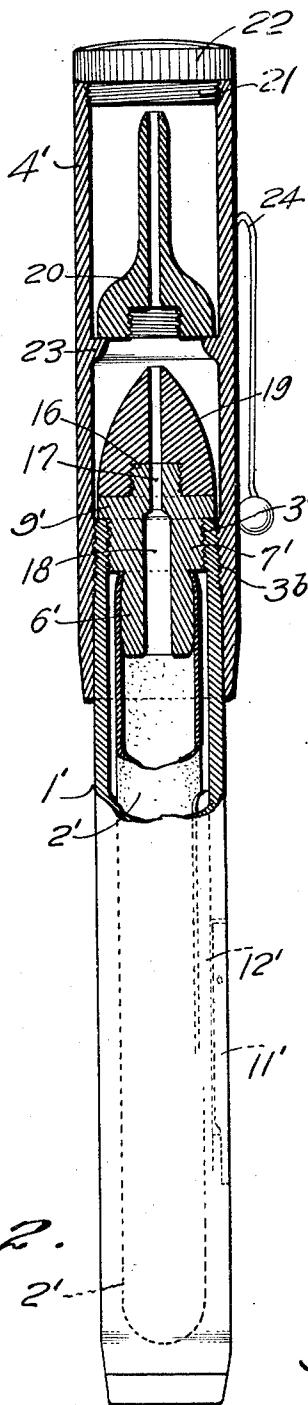
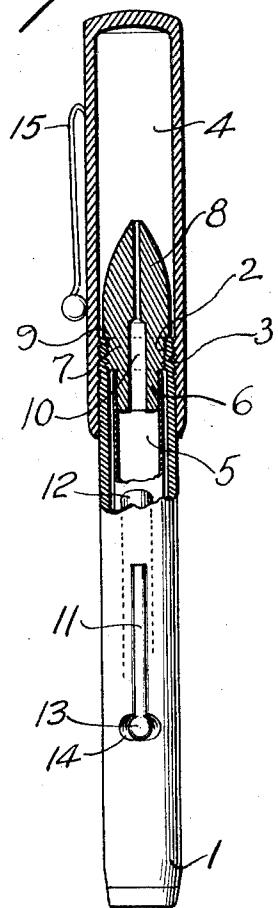
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POCKET SYRINGE

Filed Feb. 28, 1929

Fig. 1.



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POCKET SYRINGE

Application filed February 28, 1929. Serial No. 343,378.

This invention relates to improvements in syringes and more particularly, to a novel form of casing or housing therefor, the invention having for one of its objects, to provide a syringe of the pocket type, capable of being conveniently and advantageously carried in the pocket of a user's apparel, much in the same fashion as a fountain pen, wherein the syringe proper is adapted to be received and retained in a barrel-like casing and to be engaged with a nozzle device, that in turn, is connected to the casing whereby to prevent its displacement, as well as that of the syringe proper or bag; a cap-like device being receivable over the nozzle carrying portion of the casing whereby to shield and protect the same.

Another and equally important object of the invention is to provide a pocket syringe of the character mentioned, wherein provision is made in the cover or cap element thereof for receiving an extra or different type of nozzle, hence, permitting of the interchanging of the same with that nozzle engaged with the casing and enabling a person to use the device for the treating or syringing of different parts merely by engaging the proper nozzle with the casing and the syringe bag and storing the extra or remaining nozzle within the compartment provided therefor in said cap element.

Other objects of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by persons skilled in the art, I have in the accompanying illustrative drawings, and in the detailed following description based thereon, set out several possible embodiments of the same.

In these drawings:

Figure 1 is a longitudinal fragmentary section through a pocket syringe constructed in accordance with the invention;

Figure 2 is a similar view of a slightly modified form of the invention, and

Figure 3 is a disassembled detail in perspective of the syringe bag receiving casing

and one of the removable nozzles provided therefor.

Having more particular reference to the drawings, in connection with which like characters of reference will designate corresponding parts throughout, the improved construction may be stated to comprise a barrel-like casing formed of rubber, composition or other suitable material, such as conditions or preference may dictate, indicated by the numeral 1, one end of said barrel being closed and the other end thereof being open and internally and externally screw threaded as indicated by the numerals 2 and 3; the external threads 3 of the open end of the barrel being adapted to be engaged with the correspondingly formed internally arranged screw threads of a cap or cover 4, also of barrel-like or cylindrical formation and, preferably, formed of material corresponding to that from which the casing 1 is constructed, but being of a cross sectional size such as will permit it to engage over the screw threaded portion 3 of the casing, as is shown in the Figure 1.

Received within and extending throughout substantially the entire length of the barrel-like casing 1 is a syringe bag 5, formed of sheet rubber, or other suitable material, the open end or mouth portion of the bag being engaged with the reduced extension 6 of a plug 7, circular in cross section and peripherally screw threaded for engagement with the interiorly arranged screw threads 2 of said casing 1. Upon the outer end portion of the plug 7, a syringe nozzle 8 is fixedly carried and if desired, may be molded or otherwise integrally formed with said plug 7, which, is formed of hard rubber, bakelite or other suitable composition material, well known in the art. In this connection, it will be noted that a shoulder 9 is formed adjacent the jointure of the nozzle 8 with the plug 7 and that this shoulder is adapted to have abutting engagement with the adjacent marginal portion of the open end of the casing 1, whereby to limit the inward screw threaded extent of engagement of said plug 7 with the casing and also to ensure a fluid-tight connection or jointure as between said nozzle 8 and said ad-

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jacent marginal portion of the open end of the casing 1. Also, in this connection, it will be noted that a duct or way 10 is formed longitudinally of and throughout the entire length of the plug 7 with its extension 6 and the nozzle 8 in order to permit of the discharge of the fluid contents of the syringe bag 5 therefrom and through said nozzle 8 into engagement with the object being treated or syringed.

With a view toward providing means for flexing the syringe bag 5 in a manner to permit of the in-taking and the discharging of fluid thereto and therefrom, I form a longitudinally disposed slot within the intermediate portion of the casing 1 and in this slot, pivotally mount a lever 11 so that with swinging movement thereof, one end of said lever will be moved into the casing 1 and into engagement with a bearing or follower plate 12 arranged in said casing adjacent a portion of the syringe bag 5; the remaining end of the lever 11 being preferably formed with a finger engaging portion 13 whereby to facilitate engagement therewith and pivoting of the same, a recess or pocket 14 being formed in an adjacent portion of the exterior of the casing 1 whereby to permit of the flush arrangement of said finger engaging portion 13 therein, when the lever 11 is arranged in an inoperative position and substantially parallel to said casing 1.

To facilitate carrying of the device in the pocket of a user's apparel and to prevent loss or displacement of the same therefrom, I may and preferably do secure to the cap portion 4 a spring clip device 15, much after the fashion of the usual securing clip of a fountain pen cap. Thus, it will be understood that the syringe device may be arranged and carried within the pocket of a user's apparel in a manner to generally simulate an ordinary fountain pen, pencil or similar device.

In the Figures 2 and 3, I have shown a slightly modified form of the invention, wherein the syringe may be stated to consist of a barrel-like casing 1' receiving a syringe bag 2' therein; the open end of the casing 1' being internally and externally screw threaded as indicated at 3^a and 3^b.

A plug-like device 7', circular in cross section and externally screw threaded is turned into engagement with the internally screw threaded portion 3^a of the casing 1' and is formed, upon its inner side, with a reduced extension 6' snugly engaging in the mouth or adjacent open end of the syringe bag 2'. The outer side or end portion of the plug 7' is flanged as indicated by the numeral 9' and this flanged portion is adapted to have abutting engagement with the adjacent marginal portions of the open end of the casing 1', whereby to effect a fluid-tight engagement therewith. Upon the outer side of the

flanged portion 9', a reduced and externally screw threaded cylindrical extension 16 is formed, while a way or duct 17 is formed concentrically of and extends longitudinally therethrough and through the plug 7' with its extension 6', a portion of said duct 17 being preferably enlarged as at 18 within said plug 7' and extension 6'.

Syringe nozzles 19 and 20 are provided the device and, as will be noted, upon reference to the Figure 2, each of these nozzles are formed with flat faced basal portions having interiorly screw threaded pockets formed therein and adapted to be turned into engagement with the screw threaded cylindrical extension 16 of the plug 7'. Thus, as shown in the Figure 2, either of the nozzles 19 or 20 may be turned into engagement with the outer side of the plug device 7' and particularly, with the screw threaded extension 16 of said plug, the flat faced basal portion of the engaged nozzle having abutting engagement with the correspondingly formed adjacent side or face of the flanged part 9' of the plug 7' and thereby effecting a fluid-tight jointure with the same.

To close and protect the nozzle carrying portion of the syringe casing 1', I preferably provide the device with a barrel-like cap 4', said cap having an internally screw threaded portion adapted to be turned into engagement with the externally arranged screw threads 3' of the casing 1' and being of a length to permit of its extension for a distance beyond the particular nozzle engaged with the casing, for a purpose which will be presently apparent. Also, the normally outer end of this cap 4' is open and interiorly screw threaded whereby to receive the screw threaded shank portion 21 of a closure plug 105 or cap 22 adapted to normally close said open outer end of the cap 4'.

In order that the extra nozzle 19 or 20, that is, the particular nozzle not engaged with the screw threaded extension 16 of the plug 7', may be housed within the device in a manner whereby to render it convenient to carry the same and to have it available for possible usage, I form upon the inner peripheral surface of the barrel-like cap device 4' intermittently disposed lugs or ribs 23, so spacing these lugs or ribs with respect to the normally outer end of the cap 4' as to provide a compartment of a length sufficient to effectually receive either of said nozzles 19 or 20; the particular nozzle engaged in the cap compartment being adapted to rest upon the lugs or ribs 23 and to be prevented from being longitudinally and outwardly displaced therefrom by reason of the engagement of the closure plug 22 in the cap.

If desired, a spring clip or similar securing device 24 may be provided or engaged upon the cap 4', whereby to permit the releasable securing of the syringe to the side wall of a

pocket of a user's apparel. Furthermore, it is to be understood that the casing 1' is provided with a lever 11' pivotally and flushly mounted within a slot formed longitudinally of said casing, in a manner corresponding to the mounting of the lever 11 in the casing 1 of the form of the invention as disclosed in the Figure 1; one end of said lever being adapted to be engaged with a bearing or follower plate 12' arranged in the casing and adjacent to an intermediate portion of the syringe bag 2'. In this way, the intaking and discharge of fluid into and from the syringe bag 2' may be effected.

In using my improved pocket syringe and referring to that form of the invention as is illustrated in the Figure 1, one need only remove the cap 4 from the casing 1 thereby exposing the nozzle portion 8 of the device. At this time, the syringe bag 5 may be filled with a matter to be used in the syringing operation by merely pivoting or swinging the lever 11 in a direction to cause inward radial movement of the bearing or follower plate 12 with respect to the syringe bag 5, thus collapsing or partially collapsing the same. The nozzle 8 is now immersed in the matter with which it is to be filled and the lever 11 is permitted to swing to its normal position in substantially parallelism to the casing 1, whereupon the syringe bag 5 will be allowed to expand and in so doing, will create a suction sufficient to draw a loading charge of the matter through the nozzle 8, the plug 7 and its extension 6 into said bag 5. To expel or discharge the matter from the syringe bag 5, the user now engages the lever 11 and swings the same in a direction to effect a further collapsing of the syringe bag 5 by radial movement of the bearing or follower plate 12, whereupon pressure will be applied to the contents of said bag 5 and same will be discharged therefrom through the plug 7 and its extension 6 and through the nozzle 8 onto the part to be treated or syringed.

In the form of invention illustrated in the Figures 2 and 3, the usage or operation of the syringe corresponds to that as set forth in connection with the preceding embodiment. However, in this latter form of the invention, it will be understood that the user will select or choose the proper syringe nozzle and will turn the same into engagement with the screw threaded cylindrical extension 16 of the plug 7'; the remaining or extra nozzle being placed within the compartment provided therefor in the cap 4' and retained in such position by the engaging of the closure plug 22 with the normally outer and screw threaded end of said cap 4'.

When the improved pocket syringe is not in use, it will be understood that the cap provided therefor is engaged with the barrel-like casing, whereupon the device may be placed or arranged in the pocket of the user's wear-

ing apparel, much in the same fashion as a fountain pen, pencil or similar device is carried.

Manifestly, the construction shown is capable of considerable modification, and such modification as is within the scope of my claim I consider within the spirit of my invention.

I claim:

A device of the character described comprising an elongated barrel-like casing having an open end, a syringe bag received within said casing, a plug removably engaged in said open end of the casing and with the mouth of said syringe bag, the outer end portion of said plug being flanged and adapted to have abutting engagement with the adjacent marginal portion of said open end of the casing, a nozzle removably engaged with the outer end portion of said plug, a cap engageable over said nozzle and with an adjacent portion of the casing having its normally outer end open, said cap being of elongated barrel-like formation and having a nozzle receiving compartment formed within the same, and closure means for the open outer end of the cap.

In witness whereof I have hereunto set my hand.

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