A. CHANCE.

SYRINGE.

APPLICATION FILED JULY 9, 1917.

1,331,805. Patented Feb. 24, 1920.

FIG. 1.

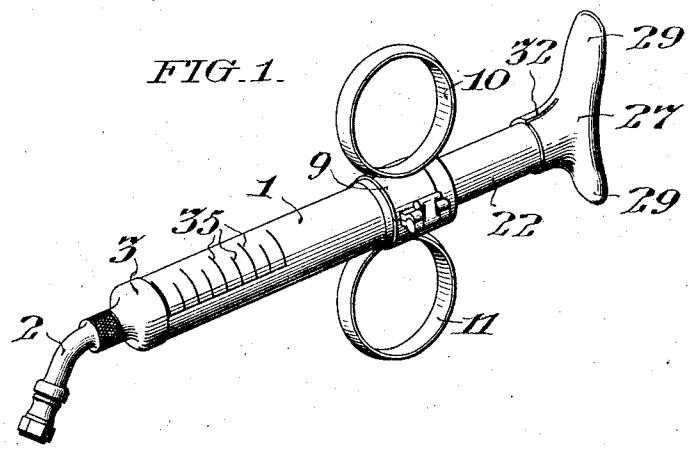


FIG. 2.

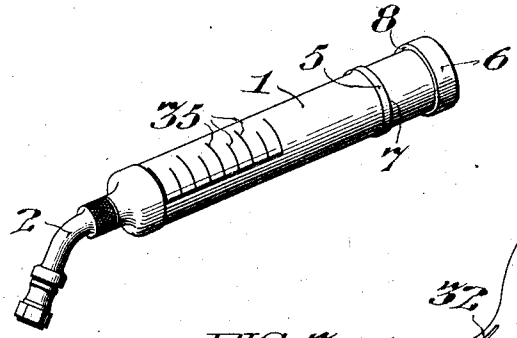


FIG. 3.

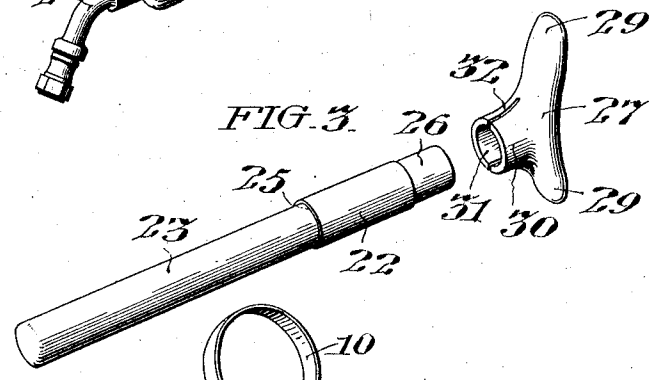
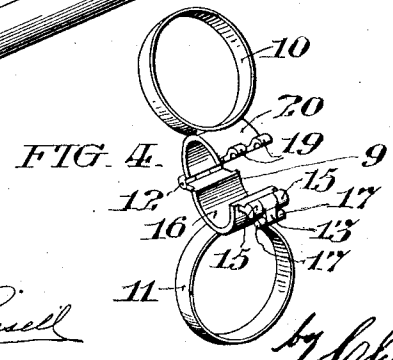


FIG. 4.



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UNITED STATES PATENT OFFICE.

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SYRINGE.

1,331,805. Specification of Letters Patent. Patented Feb. 24, 1920.

Application filed July 9, 1917. Serial No. 179,302.

To all whom it may concern:

Be it known that I, ALBERT CHANCE, a citizen of the United States, and a resident of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Syringes, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates particularly to that class of syringes which are commonly known as hypodermic syringes, and which are provided with a piston or plunger for ejecting the contents, and is especially directed to the means by which it may be grasped by the operator in discharging its contents.

The principal objects of my invention are to provide a syringe in which the parts may be readily assembled and separated for cleansing and sterilizing, and in which the finger-grip is adjustable to accommodate the operator's grasp.

Other objects of my invention are to provide a syringe having an ejecting plunger so formed as to insure the complete discharge of the contents of the syringe barrel and to provide said plunger with a handle frictionally engaged therewith, and readily separated therefrom.

Specifically stated, the form of my invention as hereinafter described, comprehends a syringe having a barrel provided with shoulders between which a removable finger-grip may be rotatably clasped, and a plunger having a shoulder forming a piston entirely filling the barrel chamber, and having a split handle.

My invention also includes all of the various novel features of construction and arrangement as hereinafter more definitely specified.

In the accompanying drawings, Figure 1 is a perspective view of a syringe constructed in accordance with my invention; Fig. 2 is a perspective view of the barrel or body of the syringe shown in Fig. 1; Fig. 3 is a perspective view of the piston plunger showing its handle detached, also in perspective; and Fig. 4 is a perspective view of the finger-grip *per se*, having its clasp opened.

In said figures, the body or barrel 1 of the syringe is provided with a nozzle 2 secured by the flange 3 to the discharge end of said barrel 1, said flange forming a groove, surrounding the outlet passage-way in said nozzle, into which groove the discharge end of the barrel 1 is conveniently secured in permanent relation with said nozzle.

The barrel 1, as best shown in Fig. 2, is provided with the rib 5 and flange 6, respectively forming shoulders 7 and 8, between which the finger-grip 9 having finger pieces 10 and 11, may be removably clasped as best shown in Fig. 1.

Said finger-grip as best shown in Fig. 4, is divided longitudinally in a plane with the axis of the barrel 1, and the relatively movable parts thereof are connected by the hinge 12 which permits said finger-grip to be readily separated from the barrel 1 for convenience of cleansing and sterilizing.

The finger-grip 9 may be rotatably engaged with the barrel 1 by the clasp, having the hasp 13 which is oscillatably connected with the trunnions 15 on the lower member 16 of said finger-grip, and which is provided with laterally extended projections 17 arranged to engage suitably provided projecting fingers 19 on the upper member 20 of said finger-grip as best shown in Fig. 1.

The syringe is provided with the plunger 22, which as best shown in Fig. 3, is provided with a piston 23, and has a shoulder 25 forming a stop for said plunger, arranged to engage the rear end or flange 6, of the barrel 1. Said plunger is also provided with a reduced end 26 for engagement of the handle 27, conveniently formed with wings 29 for engagement with the palm of the hand of the operator, and having the boss 30 providing a socket 31 to receive the reduced end 26 of the plunger, said boss being split longitudinally by the saw-cut 32 affording a slight spring action by which said handle may be frictionally engaged with said plunger when slipped onto the reduced end 26 thereof.

The barrel 1 of the syringe which may be formed of glass or other transparent material may be conveniently provided with graduations 35 so spaced as to indicate given quantities of material, corresponding to the cubical contents of the barrel indicated by said graduations, so that as the plunger is withdrawn, the material sucked into the syringe by the withdrawing action of the plunger, which causes a vacuum to draw the material into the barrel, may be gaged by the end of the plunger registering with said graduations.

It may be here noted that the piston 23 is of equal length with the chamber in the barrel 1 so that said piston completely fills said chamber when the plunger 22 is thrust inwardly to engage the shoulder 25 with the flange 6, so that the operator is assured that all of the contents of the chamber in the barrel is discharged.

My invention is advantageous in that by reason of the rotation of the finger-grip upon the barrel 1, the syringe may be conveniently grasped by the operator to suit his fancies and the nozzle 2 which may be directed laterally as shown in the drawings, may be pointed in any direction with respect to the rotatable adjustment of said finger-grip.

I do not desire to limit my invention to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claims.

Having thus described my invention, I claim:

1. A syringe comprising a barrel, having opposed shoulders, a plunger for discharging the contents of said barrel and having a two-part finger-grip embracing said barrel between said shoulders in removable relation therewith, and means for locking the parts of said finger-grip together.

2. A syringe comprising a barrel, and a plunger for discharging the contents of said barrel, and having a finger-grip formed of hinged members rotatably mounted on said barrel in removable relation therewith.

3. A syringe comprising a barrel, and a plunger for discharging the contents of said barrel, and having a finger-grip formed of hinged members, and provided with a hasp by which it is rotatably mounted on said barrel in removable relation therewith.

4. A syringe comprising a barrel, and a plunger for discharging the contents of said barrel, and having a finger-grip provided with finger pieces hingedly connected and having a hasp for securing them together.

5. A finger-grip for a syringe, comprising finger pieces hingedly connected together and provided with a hasp for securing the hingedly connected pieces closed upon the barrel of said syringe.

In witness whereof I have hereunto set my hand this 29th day of June, A. D. 1917.

ALBERT CHANCE.

Witnesses:
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CLIFTON C. HALLOWELL.