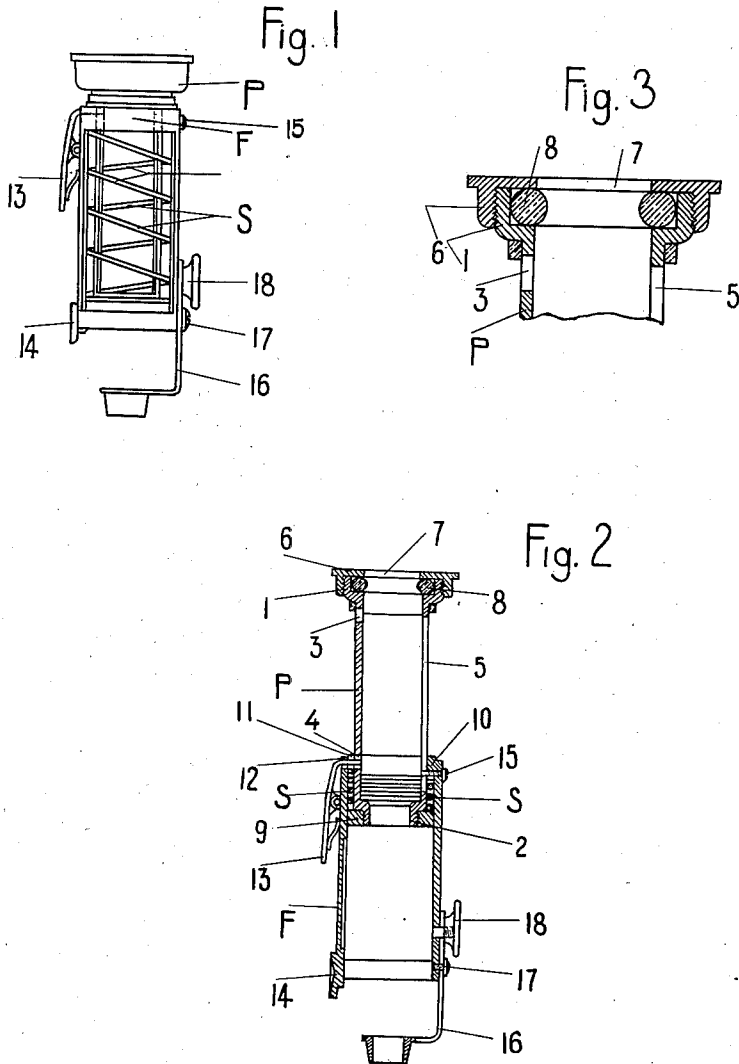


G. GIORDANO.
 SYRINGE HOLDER.
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1,054,528.

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GENEROSO GIORDANO, OF TURIN, ITALY.

SYRINGE-HOLDER.

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To all whom it may concern:

Be it known that I, GENEROSO GIORDANO, a subject of the King of Italy, and a resident of Turin, Italy, have invented certain new and useful Improvements in Syringe-Holders, of which the following is a full, clear, and exact specification.

The present invention relates to syringe holders, and the object of the invention is to provide a spring controlled syringe holder, so arranged that the use of syringes for injections by any person, is rendered easy without inconvenience.

The present invention can be employed with different kinds of syringes at present in use, but is preferably used with syringes made of glass, because they can be readily sterilized.

The preferred form of the invention is illustrated in the annexed drawings, in which:

Figure 1 shows the syringe-holder in the position of rest; Fig. 2 is a sectional view of the apparatus ready for action; and, Fig. 3 shows a detail on an enlarged scale.

The apparatus substantially consists of the holder P, the stem F, and a spiral spring S. The holder P is a cylinder or tube provided at its upper end with a boss 1 which is threaded on the outside, and at its lower end with a contracted portion 2 which is also threaded on the outside. The cylinder is provided on one side with two openings 3 and 4 located respectively near the upper and lower ends of the cylinder and arranged in line with each other, and on the diametrically opposite side of the cylinder a longitudinal slot or opening 5 is provided. A small cover 6 is screwed on the expanded portion or boss 1, and is provided with the opening 7 which has a diameter suitable for the passage of a common syringe, the syringe also passing through a rubber fitting 8 of annular form held at the upper end of the holder P. Upon tightening the cover 6 the rubber fitting bears against the syringe that has been introduced and holds the latter in position in the holder.

On the lower portion 2 of the holder is screwed an annular plate 9 which has a diameter a little less than the inside diameter of the tubular stem F.

The spiral spring S is a common cylindrical spring of a diameter such as to permit its being placed on the outside of the

holder P and between the latter and the stem F.

The stem F is of a cylindrical form and at its upper end is provided with an annular piece or plate 10, the spring S being arranged between the plate 10 and the plate 9 at the lower end of the holder. The plate 10 is provided with the opening 11. The stem F has an opening 12 at its upper end which registers with the opening 11 of the plate 10, and the stem F is provided with the spring-lever 13, the piece 14 for the finger, the guiding screw 15 which engages the longitudinal slot 5 in the holder P, the regulator 16 with a screw 17 for controlling the projection of the needle and a pressing screw 18 for engagement by a finger when using the syringe.

The apparatus works in the following manner: In the position of rest (Fig. 1) the holder P is inside the stem F, only the portion 1 with the cover 6 projecting at the upper end of the stem: the spring S which is disposed between the plates 9 and 10 is neither in tension nor compressed, and the point of the spring-lever 13 passing through the openings 11 and 12 projects into the opening 3 near the upper end of the holder P. By holding the stem F in one hand and pulling the holder P with the other hand, the spring S is compressed between the plates 9 and 10 until the point of the lever 13 registers with the opening 4 in the lower part of the holder, and enters it, holding the holder P in the position shown in Fig. 2. By pressing on the rear portion of the spring-lever 13, the point of the lever is withdrawn from the opening 4, and the syringe-holder P by the action of the spring S moves rapidly to its position of rest so that the needle of the syringe carried by the holder enters the tissues of the patient.

What I claim is:

1. A syringe holder, comprising two tubular parts, one of said parts being adapted to receive and hold a syringe and to telescope in the other part, and a spring connecting said parts under tension, the telescoping of the parts under tension of the spring moving the syringe holding part within the other part to project the needle of the syringe carried thereby.

2. A syringe holder comprising two tubular telescoping members open at the ends,

one member being adapted to receive and hold the body of a syringe carrying a needle, a spring connecting said members under tension, the telescoping of the members under tension of the spring moving the syringe holding member to project the needle of the syringe carried thereby from the other member, and means for holding said members in extended position.

3. A syringe holder comprising two tubular members open at the ends, one member being adapted to hold the body of a syringe and to telescope within the other tubular member, a spring connecting said tubular members under tension, the telescoping of the members under tension of the spring moving the syringe holding member within the other member to project the needle of the syringe from the latter member, and an adjustable regulator carried by the last mentioned member for controlling the penetration of the needle of the syringe.

4. A syringe holder comprising two tubular members one member arranged to telescope within the other member and adapted to receive a syringe, means for holding the syringe in position within said member, a spring for normally holding the members one within the other and adapted to exert tension on the syringe holding member when the latter is extended, and releasable means for holding the said member in extended position.

5. A syringe holder comprising two tubular members open at the ends one member adapted to receive a syringe and provided at one end with means for engaging the body of the syringe to hold the same in position therein, the said syringe holding member being arranged to extend within the other member and to be partly withdrawn therefrom, a spiral spring for normally holding the members one within the other, the said spring being arranged between the members and adapted to be compressed when the inner or syringe holding member is drawn out, means for guiding the syringe holding member in its movement, and a spring lever on the outer mem-

ber and adapted to engage the inner member to hold the same in extended position.

6. A syringe holder, comprising two tubular members, one member having a cover at one end provided with a central opening adapted for the passage of a syringe and a rubber ring held at said end of the member and adapted to be compressed by the cover to cause the ring to bear against the syringe to hold the same in position, the said member being arranged to telescope within the other member, a spring for normally holding the members one within the other, the said spring being adapted to exert tension on the syringe holding member when the latter is extended, and releasable means for holding the said member in extended position.

7. A syringe holder, comprising two tubular members, one member being provided with means for holding a syringe introduced therein, the said member being arranged to telescope within the other member, the inner or syringe holding member having a longitudinal slot in one side, and apertures in the opposite side in line with each other and located near the top and bottom of the member, the other or outer member having a guide engaging the said longitudinal slot, a spring-lever carried by said outer member and having a point adapted to engage either of said apertures in the syringe holding member to hold the latter member within the outer member or in extended position, a spiral spring arranged between the inner and outer tubular members, and adapted to be compressed when the inner member is extended and an adjustable regulator on said outer member for controlling the projection of the needle of the syringe.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GENEROSO GIORDANO.

Witnesses:

JOCELYN GOUBEYRAN,
FELIX BAZETTA.