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PLUNGER CONTROL FOR HYPODERMIC SYRINGES

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Fig. 1.

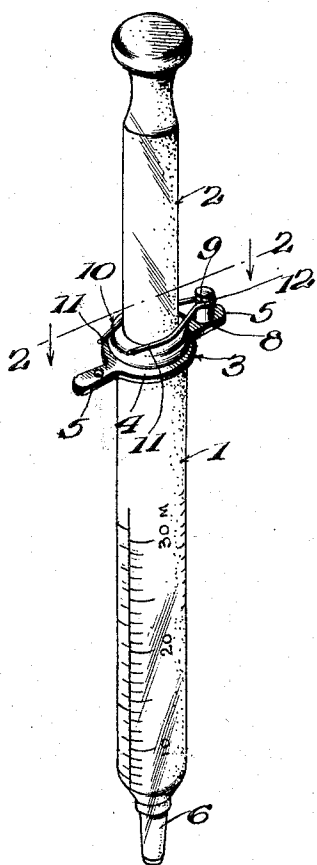


Fig. 2.

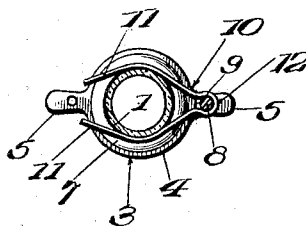
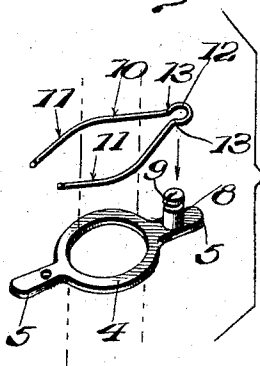


Fig. 3.



WITNESSES

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PLUNGER CONTROL FOR HYPODERMIC SYRINGES.

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This invention relates to a plunger control for hypodermic syringes whereby the plunger is releasably held in any position in the barrel of the syringe and whereby the control of the plunger is facilitated.

The object of the invention is the provision of a plunger control having these advantages and capacities and wherein the clip is permanently associated with the finger rest in such manner as to prevent the clip from accidentally becoming separated from the finger rest and possibly becoming lost or in any event making necessary the rather tedious operation of uniting the clip and the finger rest.

Another object of the invention resides in the provision of a plunger control of such a character that the finger rest and the clip may be readily removed from the barrel and plunger of the syringe without destroying the tension of the clip.

A further object is the provision of a plunger control of such a character that the tension of the clip may be readily varied to suit the individual touch of the operator of the syringe.

A still further object resides in the provision of a plunger control which is economical to manufacture and which does not employ any convolutions or other interstices of such a character as to control and retain dirt, germs, chemicals, or the like.

Another object resides in the provision of a plunger control of the character specified and wherein the clip may be readily removed and replaced although permanently held against accidental disassociation from their finger rests.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which:—

Figure 1 is a perspective view showing a plunger control embodying the present invention,

Figure 2 is a view in section on the line 2—2 of Figure 1, and

Figure 3 is a group view in perspective of the finger rest and clip prior to assembly.

Referring to the drawings the numeral 1

designates a barrel in which a plunger 2 is fitted.

A finger rest is designated generally at 3 and includes a ring 4 having radial arms 5. The finger rest may be slipped up over the end of the barrel at which the nozzle 6 occurs and is engageable with a flange 7 integrally formed with the end of the barrel 1 into which the plunger 2 extends.

On one of the arms 5 of the finger rest a pivot or stud 8 is secured and is formed adjacent its free end with an annular groove 9.

A clip, designated generally at 10, is provided and consists of a single piece of resilient or spring wire formed to provide curved clipping arms 11, the arms 11 being connected by an approximately circular mounting member or portion 12. At the junctures of the arms 11 and the mounting member 12 the wire constituting the clip is provided with inwardly deflected portions 13. In the assembly the mounting member 12 of the clip is received in the annular groove 9 of the stud 8 and the inwardly deflected portions 13 of the wire constituting the clip and the substantially circular form of the mounting member 12 permanently unite the clip to the finger rest through the stud 8. Although permitting the clip to turn on the stud and to be detached from the same when the arms 11 are grasped and the clip 10 pushed off the stud 8. Usually it is not necessary to remove the clips 10 from the finger rests unless it is desired to replace the same.

In use the finger rest 3 engages the flange 7 of the barrel and the clip 10 is disposed on the opposite side of the flange 7 from the finger rest 3. The arms 11 of the clip engage the plunger 2 and resiliently grip the same so as to releasably hold the plunger in adjusted position. The tension of the arms 11 and the resistance which they oppose to the movement of the plunger may be varied by pressing the arms toward or away from each other, so that the clip may be adjusted to the touch of the individual operating the syringe.

When sterilizing the syringe the glass parts and metal parts must be sterilized separately and, therefore, it is necessary to take the finger rest and clip off of the barrel. This may be readily accomplished by withdrawing the plunger 2 entirely, then rotating the clip 10 about the stud 8 until it no longer over-

lies the barrel whereupon the finger rest and the clip may be slid off of the end of the barrel at which the nozzle 6 occurs. All of this may be done without varying the tension of the clip.

The portions of the clip which engage the plunger have no convolutions or interstices liable to collect or retain dirt, germs, chemicals, or the like.

10 While the clip and finger rest are permanently associated in that they are not liable to be accidentally disconnected from each other and in that it is not necessary to take them apart for the purposes of sterilizing
15 or the like, nevertheless, the clips may be removed from the finger rests for the purposes of replacement or for other good reasons.

I claim:

20 1. In a plunger control for hypodermic syringes, a finger rest having an arm, a stud mounted on the arm and having an annular groove, and a clip made of resilient wire and having curved gripping arms engageable
25 with the plunger and having a mounting member connecting the arms, the mounting

member being approximately of circular form and being received in the groove of the stud, the junctures of the arms of the mounting members being inwardly deflected. 30

2. A clip for syringes, comprising a pair of resilient arms and means for pivotally connecting the arms to the barrel of the syringe at a point such that the arms may swing beyond the periphery of the barrel to
35 enable the removal of the plunger, the pivotal connection between the arms and the barrel detachable to enable removal of the arms from the barrel.

3. A clip for syringes, comprising a pair of resilient arms and means for pivotally connecting the arms to the barrel of the syringe at a point such that the arms may swing beyond the periphery of the barrel to enable the removal of the plunger, the pivotal
40 connection between the arms and the barrel detachable to enable removal of the arms from the barrel, the pivotal connection including an annularly grooved stud on the barrel, and a loop extension connecting the
45 arms and adapted to snap into the groove. 50

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