

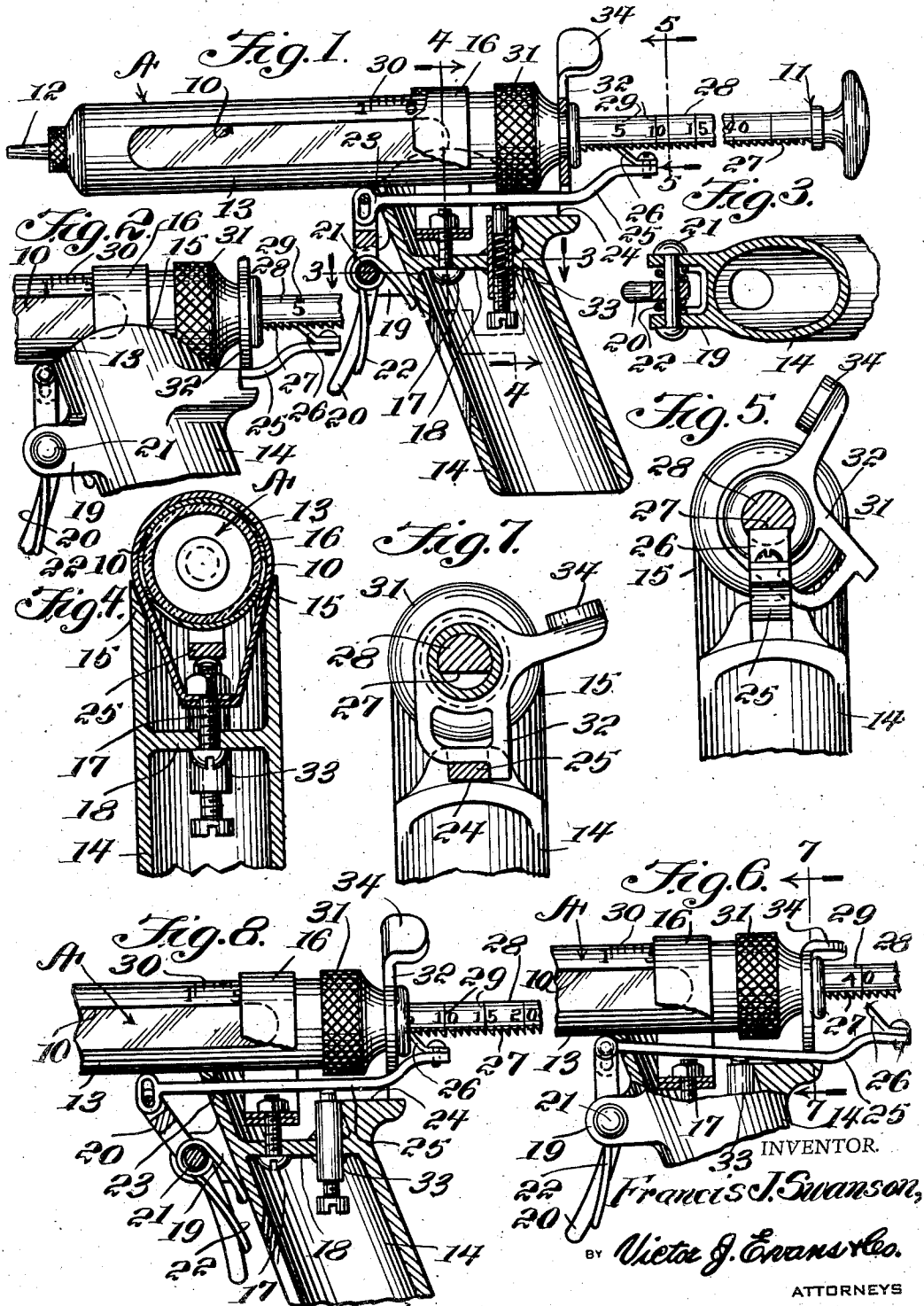
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VACCINATING GUN

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2,417,140

VACCINATING GUN

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4 Claims. (Cl. 128—224)

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The invention relates to a gun and more especially to a vaccinating gun or serum shooter.

The primary object of the invention is the provision of a gun or shooter of this character, wherein the same which is of standard construction can be operated single-handed, so as to enable the injection of vaccine within a human being or an animal with ease and dispatch, the gun being equipped with a trigger mechanism, which is conveniently operated, to enable the gun to be much faster and more accurate than any ordinary guns now in use.

Another object of the invention is the provision of a gun of this character, wherein it is supplied with a pistol grip and a trigger having sear action on the plunger, so that the gun can be operated with one hand and a graduated dose of vaccine can be discharged therefrom from one to five (1 to 5) cc. per stroke of the plunger with accuracy, the grip and trigger fitting being of novel construction and is unique in the arrangement thereof.

A further object of the invention is the provision of a gun of this character, which is simple in construction, thoroughly reliable and effective in operation, strong, durable, readily and easily handled single-handedly, accurate in the working thereof, readily and easily adjusted, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which shows the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a side elevation of a vaccine gun showing the pistol grip and trigger mechanism constructed in accordance with the invention applied thereto, the grip being partly in section.

Figure 2 is a fragmentary side view thereof.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1 looking in the direction of the arrows.

Figure 5 is a sectional view taken on the line 5—5 of Figure 1 looking in the direction of the arrows.

Figure 6 is a fragmentary side view partly broken away.

Figure 7 is a sectional view taken on the line 7—7 of Figure 6 looking in the direction of the arrows.

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Figure 8 is a view similar to Figure 6 showing the trigger in adjusted position.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally a vaccine gun or syringe of any standard construction, having a sight window 10 in each side thereof, as usual, and this gun or syringe is provided with a hand actuated plunger 11 for dispensing the vaccine as contained within the same through a discharge nozzle or needle 12 of common construction.

The gun at its barrel 13 is fitted with a pistol grip or handle 14 which has the said barrel saddled at 15 therein, while this barrel 13 is adjustably clamped to the handle by a friction clip or band 16, which is held fixed by a coupling bolt 17 anchored in a cross web 18 integrally formed in the grip or handle 14.

On the grip or handle 14 forwardly thereof is a forked bearing 19 in which is a vertically swinging trigger 20, which is journaled on a horizontal pivot 21 fitting such bearing 19, the trigger being acted upon by a spring 22 which returns it to normal position after being pulled for the operation of the gun or syringe A, as hereinafter described.

Slidably fitted in guideways 23 and 24, respectively, as provided in the grip or handle 14 is a throw link 25, which carries a cocking sear 26, adapted for ratchet engagement with a toothed rack 27 formed on the plunger stem or shank 28, which is provided with exposed graduated scale marks or indicators 29 longitudinally thereof which coordinate with a scale beam 30 on the barrel 13 so that a determined amount of vaccine can be dispensed from the latter on the automatic working of the plunger 11 for administering to a human being or animal from 1 to 5 cc. doses, the gun being usable by medical or veterinary professions.

The gasket cap 31 of the barrel 13 through which the plunger operates is provided with a hand manipulated cam 32 which works against the link 25 to throw the sear or dog 26 out of engagement with the rack 27, against the resistance of an adjustable tensioning device 33 fitted within the grip or handle 14 to urge the sear or dog into engagement with the said rack 27 when released by the cam 32, which is hand shifted by a thumb or finger piece 34, the cam being rotatably fitted on the gasket cap 31, as best seen in Figures 5, 6, 7 and 8 of the drawing.

To operate the gun A, it is necessary to actuate the cam 32 so as to free the plunger 11 which is

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hand pushed inwardly of the barrel 13 when the plunger has been set for the discharge of a determined amount of vaccine from the gun or syringe A. Then when the desired dose is registered by the scale, the cam is released so that when the trigger 20 is pulled, the plunger 11 is driven inwardly to dispense the dose from the gun or trigger A as should be obvious. The link 25 is urged into engagement with the rack 27 by the device 33.

The gun or syringe A is susceptible of operation by one hand of the user.

What is claimed is:

1. A gun of the kind described, comprising a barrel, a plunger working within the barrel and having a stem provided with a toothed rack, a handle grip carried by the barrel, a pull trigger pivoted to the grip and having a sear engageable with the rack for moving the plunger, a gasket cap mounted on the end of said barrel, and cam means mounted on the gasket cap on the end of the barrel through which the plunger operates for releasing the sear from the rack.

2. A gun of the kind described, comprising a barrel, a plunger working within the barrel and having a stem provided with a toothed rack, a handle grip carried by the barrel, a pull trigger pivoted to the grip and having a sear engageable with the rack for moving the plunger, a gasket cap mounted on the end of said barrel, means for releasing the sear from the rack and cam means mounted on the gasket cap on the end of the barrel through which the plunger operates, for releasably urging the sear into engagement with the rack.

3. A gun of the kind described, comprising a barrel, a plunger working within the barrel and having a stem provided with a toothed rack, a handle grip carried by the barrel, a pull trigger

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pivoted to the grip and having a sear engageable with the rack for moving the plunger, a gasket cap mounted on the end of said barrel, means for releasing the sear from the rack, cam means mounted on the gasket cap on the end of the barrel through which the plunger operates for releasably urging the sear into engagement with the rack and means for adjustably clamping the grip to the barrel.

4. A gun of the kind described, comprising a barrel, a plunger working within the barrel and having a stem provided with a toothed rack, a handle grip carried by the barrel, a pull trigger pivoted to the grip and having a sear engageable with the rack for moving the plunger, a gasket cap mounted on the end of said barrel, cam means mounted on the gasket cap on the end of the barrel through which the plunger operates for releasing the sear from the rack, means for releasably urging the sear into engagement with the rack, means for adjustably clamping the grip to the barrel and graduated scales on the stem and barrel for coordination with each other.

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