

No. 822,079.

PATENTED MAY 29, 1906.

L. ROUSSY.  
HYPODERMIC SYRINGE.  
APPLICATION FILED MAY 11, 1905.

Fig. 1.

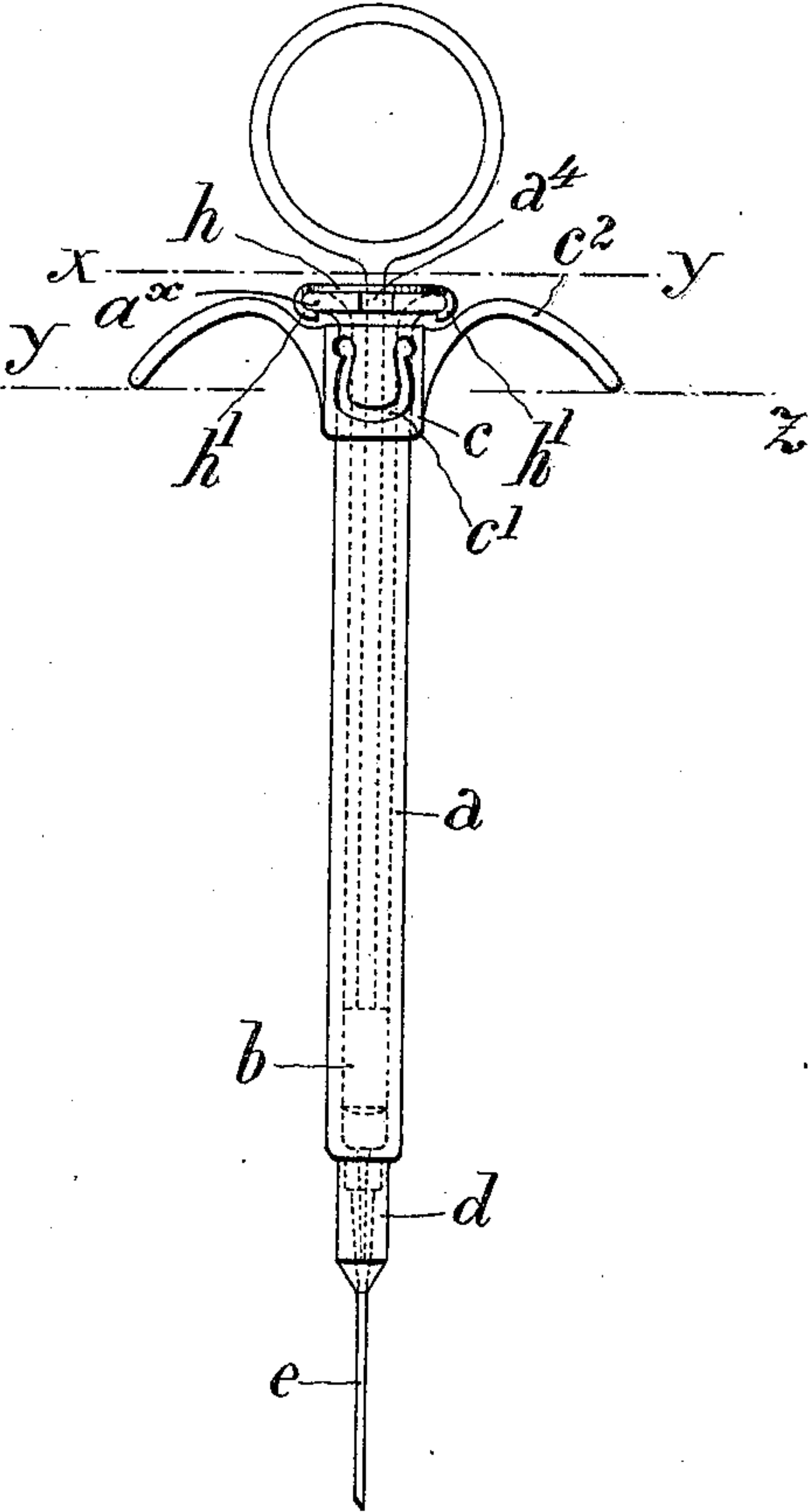


Fig. 3.

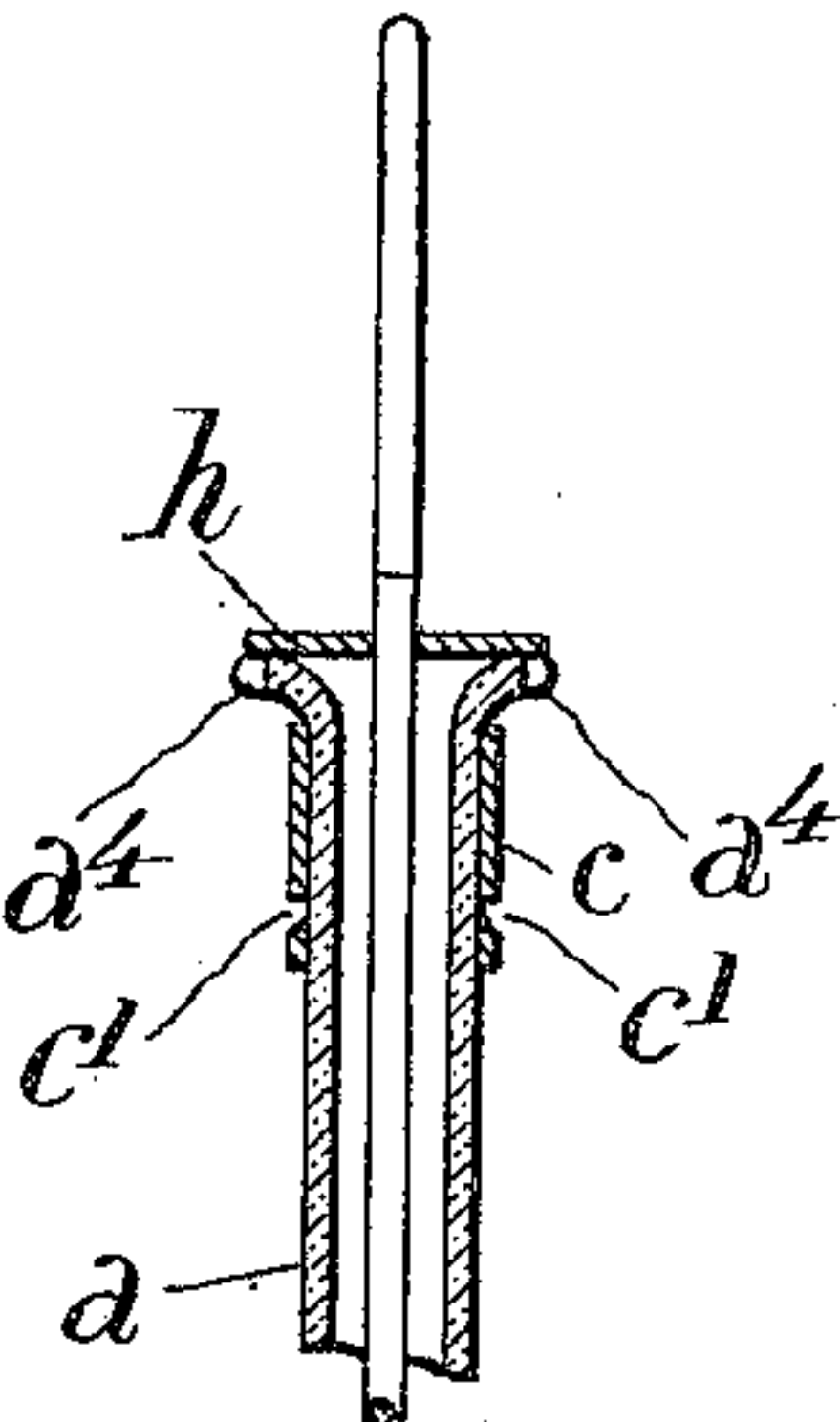


Fig. 2.

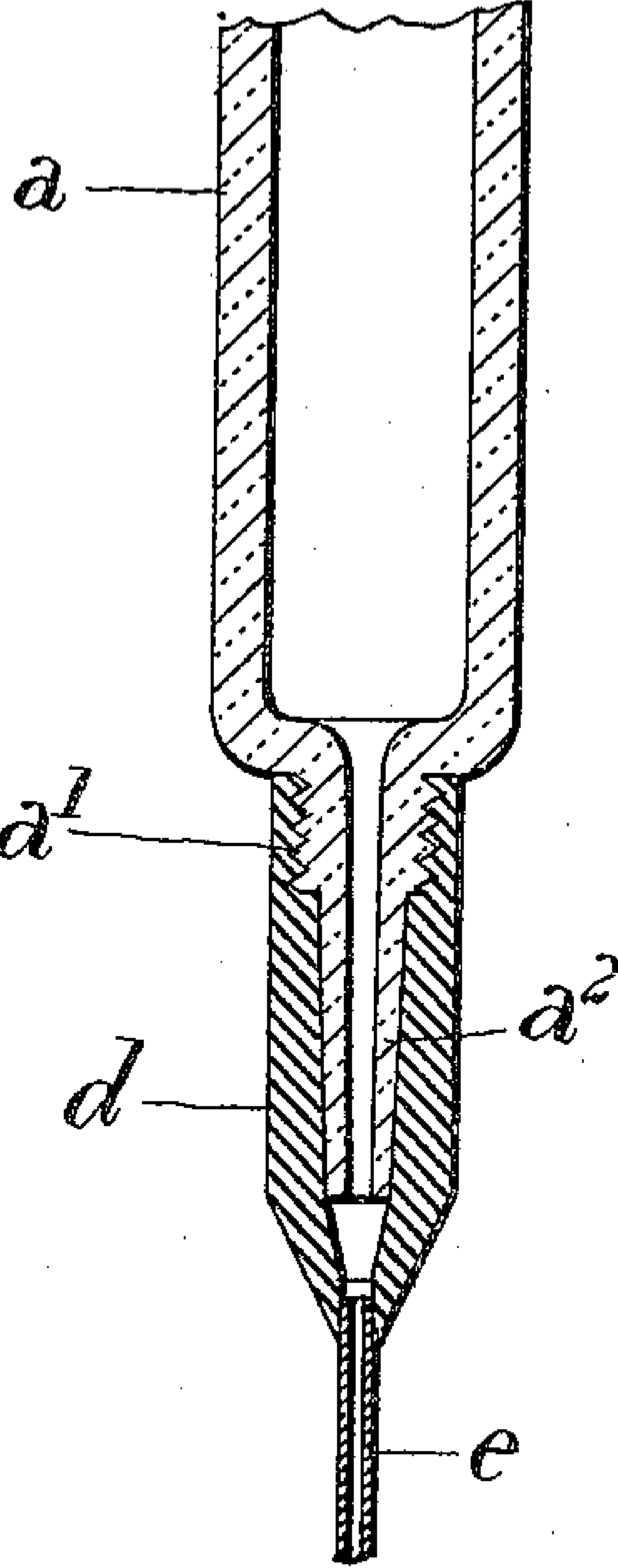


Fig. 4.

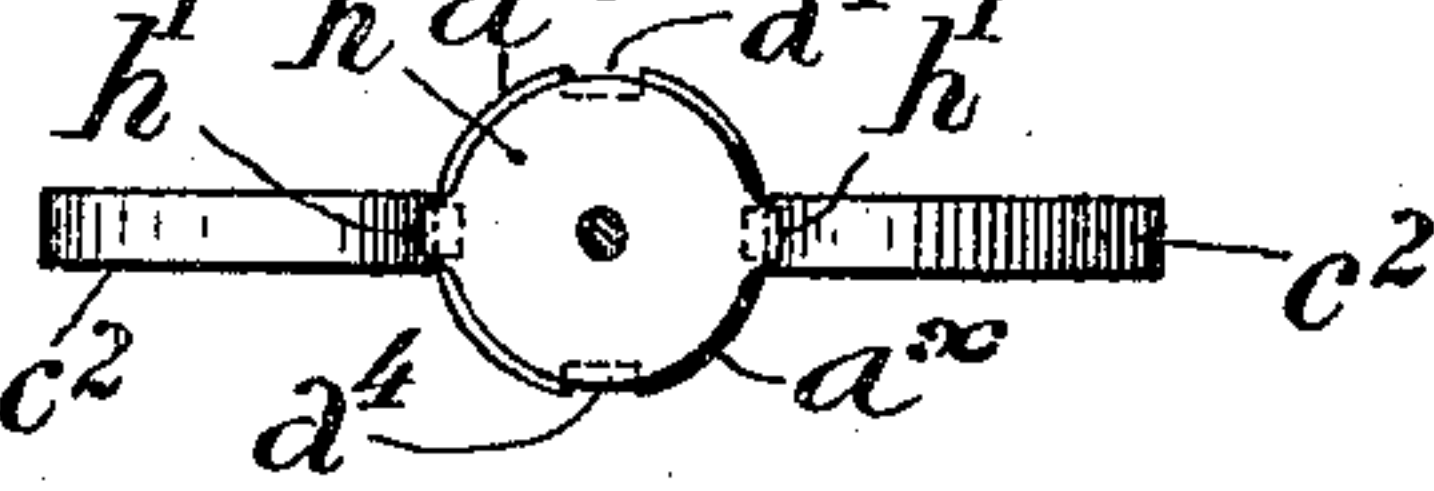
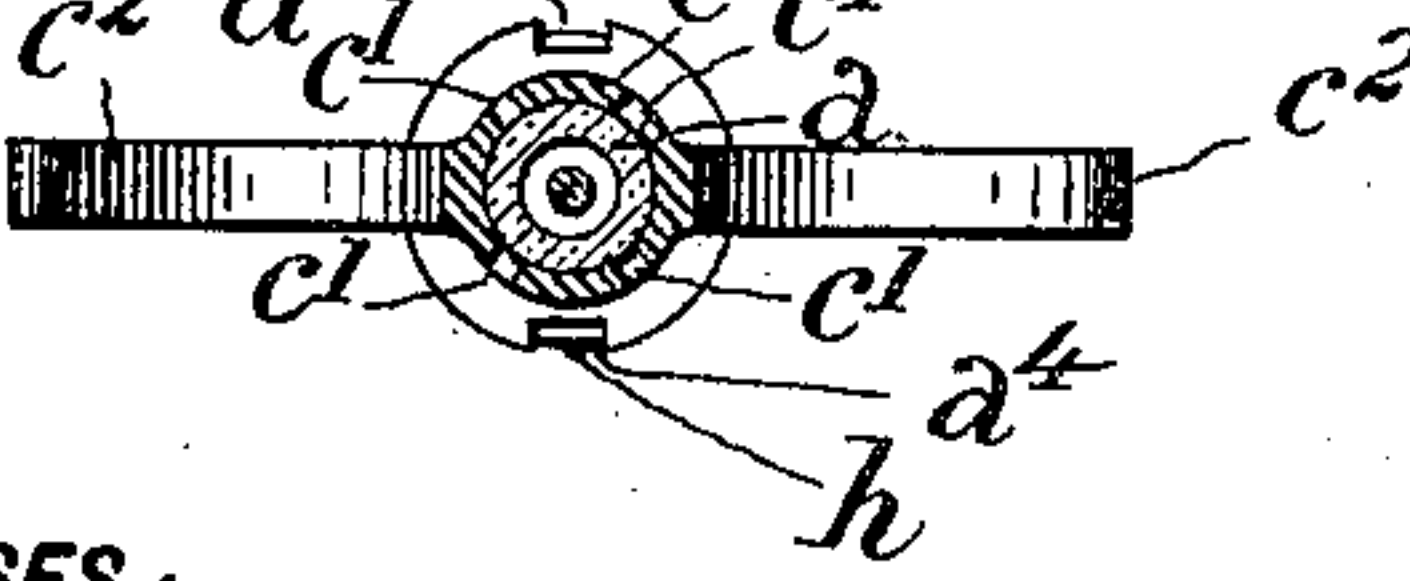


Fig. 5.



WITNESSES:

*H. J. Suhrbier.*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

LOUIS ROUSSY, OF GENEVA, SWITZERLAND.

## HYPODERMIC SYRINGE.

No. 822,079.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed May 11, 1905. Serial No. 260,056.

*To all whom it may concern:*

Be it known that I, LOUIS ROUSSY, a citizen of the Republic of Switzerland, and a resident of Geneva, Switzerland, have invented certain new and useful Improvements in Hypodermic Syringes, of which the following is a specification.

This invention pertains to hypodermic syringes.

One object of the same is to provide in such a device improved means for limiting the outward movement of the piston or plunger.

A further object of the invention is to furnish improved means whereby an effective stroke of the plunger may be obtained by the use of only one hand.

With these and other ends in view the invention consists in a hypodermic syringe embodying the novel features and combinations of parts to be hereinafter described and recited in the claims.

In the accompanying drawings, in which the same parts are indicated by the same reference characters, Figure 1 is an elevation of a syringe constructed in accordance with the invention. Fig. 2 is an enlarged vertical longitudinal section through the lower portion of the same. Fig. 3 is a longitudinal section through the upper portion of the syringe. Fig. 4 is a transverse section on line  $xy$ , Fig. 1; and Fig. 5 is a similar section taken on line  $yz$ , Fig. 1.

The cylinder or barrel  $a$  of the improved syringe is preferably of the form shown, the area of the piston-plunger  $b$  bearing such a relation to the length of the cylinder that said plunger may be readily made to overcome the resistance offered by the liquid contained in the syringe. This cylinder  $a$  is provided at its rear end with an outwardly-flaring flange  $a^x$ , made integral therewith, and said flange is cut away at diametrically opposite points to form rectangular recesses or notches, (designated by reference characters  $a^4$ ), as shown. A piston-limiting disk  $h$  is placed against the rear end of the cylinder and provided with a central aperture, through which the plunger-rod is movable, as shown in Fig. 3. Said disk is also provided with diametrically opposite peripheral hooks or lugs  $h'$  of less width than the recesses  $a^4$  and bent or turned over the flange  $a^x$  and snugly embracing the latter. When the limiting-disk is to be mounted on the cylinder, the hooks  $h'$  are placed over the recesses  $a^4$

and the disk then partially rotated, so that said hooks will then embrace the flange  $a^x$  and prevent the displacement of said disk therefrom, except when the latter is manually turned in order to make the hooks and recesses re-register, after which the disk may be dismounted, as will be understood.

In advance of the flange  $a^x$  is arranged a separate collar  $c$ , preferably made of metal, and said collar or sleeve carries diametrically-disposed finger-hooks or finger-receiving arms  $c^2$ , by means of which, in conjunction with the ring or other member upon the plunger-rod, the plunger may be readily operated by one hand. The collar  $c$  is provided with U-shaped slots  $c'$ , forming longitudinally-disposed spring-fingers which frictionally grip or bite against the cylinder or barrel and are disposed toward the needle end thereof in order to prevent the displacement of said collar toward said end under ordinary conditions. It is obvious, however, that said collar may be removed from the cylinder over said end of the same when desired and replaced thereon by being slid along from said end. During the use of the syringe the collar  $c$  is retained against displacement toward the rear end of the syringe by the flange  $a^x$ .

The discharge end of the glass cylinder  $a$  is provided with an extension, Fig. 2, formed of an externally-screw-threaded cylindrical portion  $a'$  and a conical end portion  $a^2$ , intended to engage the conical portion of the bore of a metallic sleeve  $d$ , screwed on the said screw-thread  $a'$  of the extension. The tubular needle  $e$  of the syringe is soldered or fixed by any other suitable means to the sleeve  $d$ .

When it is desired to clean the syringe, it is simply necessary to partially rotate the piston-limiting disk and remove the same, after which the piston may be removed, and then to unscrew and remove the needle-carrying sleeve. These parts can then be properly sterilized.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a syringe barrel or cylinder having a laterally-extending flange with cut-away portions or recesses in its outer edge, of a plunger-limiting disk having hooks embracing said flange at points other than said recesses but adapted to register with the latter when said disk is partially rotated.

2. In a hypodermic syringe, a finger-hook-carrying sleeve having barrel - engaging spring-fingers formed in the wall thereof.
3. In a hypodermic syringe, a finger-hook-carrying sleeve having formed in the wall thereof longitudinally-disposed barrel-engaging spring-fingers.
4. In a hypodermic syringe, a finger-hook-carrying collar or sleeve *c* provided in its side wall with U-shaped slots *c'* forming barrel-gripping fingers.
5. The combination, with a syringe-barrel having an outwardly-disposed flange, of a finger-hook-carrying sleeve embracing said

barrel and retained against backward movement therealong by said flange, said sleeve being provided in its wall with slots forming fingers which frictionally engage said barrel and are disposed toward the needle end thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS ROUSSY.

Witnesses:

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ROD. DE VURTENBERGER.