

W. H. PARK.
 SERUM CONTAINER.
 APPLICATION FILED NOV. 25, 1911.

1,143,855.

Patented June 22, 1915.

Fig. 1.

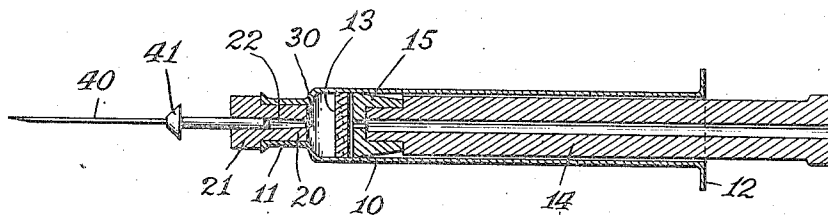


Fig. 2.

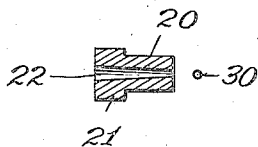
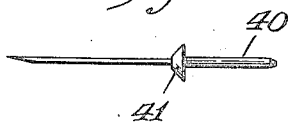


Fig. 3.



Attest:
 William R. Baird
 Alan C. Mc Donnell

Inventor:
 William H. Park
 by *S. J. Cox* Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. PARK, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO
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SERUM-CONTAINER.

1,143,855.

Specification of Letters Patent.

Patented June 22, 1915.

Application filed November 25, 1911. Serial No. 662,269.

To all whom it may concern:

Be it known that I, WILLIAM H. PARK, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Serum-Containers, of which the following is a specification.

This invention relates to containers for serums and similar materials intended to be administered by means of hypodermic injections, and its novelty consists in the construction and adaptation of the parts as will be hereinafter more fully pointed out.

In practice serums must be sterilized and preserved out of contact with the air in order that they may not become infected with foreign bacilli and thus introduce in the system of the patient for whose use they are intended complications which might be disastrous to his health or life. At the same time such serums must be preserved in a container in which the hypodermic needle can be promptly and securely inserted, and after such insertion must be administered by compression so as to force the serum through the needle without any contact arising with any substance apt to contaminate the serum. In order to meet these requirements I have invented the container which is the subject matter of this application for Letters Patent. It is so made that the serum contained therein does not affect any of the materials of which it is composed and is not affected by them. It is readily adapted to the use of hypodermic needles of different sizes, which needles can be readily inserted in the ordinary closure of the container, and it is provided with means for administering the serum after the insertion of the needle without the use of any additional or supplemental device.

In the drawings Figure 1 is a central longitudinal section of a device embodying my invention. Fig. 2 is a section of the stopper and temporary closure, and Fig. 3 is a detail of the needle employed with the container.

In the drawings 10 is a tubular body of glass or similar material neutral with respect to the serum to be contained therein. It is provided with a restricted neck indicated at 11 and with an open flaring bottom having an outwardly extending annular

flange 12. The tubular body is of approximately the same internal diameter throughout and is adapted to contain a retainer 13 of cork, paper, compressed pulp or similar inert material and a plunger 14 having an elastic or soft head made to fit tightly inside of the tubular body and adapted to serve as an air compressing piston when reciprocated therein.

Inside of the neck is a stopper preferably made of rubber or similar elastic inert material and comprising a tubular body adapted to fit tightly within the neck and also if desired provided with an external annular flange 21. It is also provided with an aperture 22 extending the entire length of stopper.

30 is a temporary closure adapted to fit inside of the aperture 22. It is preferably made globular in shape and of inert material which will not oxidize or become affected by the serum or which in turn will not affect the serum injuriously. I have found that glass is a good material for the purpose indicated.

A hypodermic needle is shown at 40. It is provided with the usual central aperture and with a projecting annular flange 41.

In using the device, the tubular body 10 is first sterilized preferably by heat, and the retainer 13 also sterilized is inserted within it preferably near enough to the neck 11 so that a suitable quantity of the serum may be placed between the retainer and the stopper 20 after the latter is inserted. The plunger 14 with its elastic head is then inserted within the tube 10. The serum is then introduced and the stopper 20 with the aperture 22 in which the temporary stopper 30 has already been inserted is sterilized and put in place. The serum is thus protected from contact with the outer air and from any infecting substances carried thereby.

When the instrument is to be used the shank of the needle 40 is inserted in the aperture 22 of the stopper and the temporary stopper 30 is pushed out of such aperture and inside of the tubular body. The plunger 14 is pushed forward and this in turn moves the retainer 13 which also moving forward forces the serum through the hollow body of the needle 40.

What I claim as new is:

1. A stopper for a device of the character described provided with a needle receiving

aperture extending therethrough and a temporary closing device therein, the stopper being made of elastic material and the temporary closing device being made of rigid material unaffected by serum, substantially as described.

2. In a device of the character described, the combination of a stopper, said stopper provided with a needle receiving aperture extending therethrough, and a temporary closing device in said aperture, the said temporary closing device being of greater diameter than the aperture, and the walls of said aperture being expansible so that it is held normally in said aperture by the pressure of the expanded walls thereof, said temporary closing device being made of material unaffected by serum, substantially as described.

3. In a device of the character described, the combination of a stopper, said stopper

provided with an aperture extending therethrough, a temporary closing device of greater normal diameter than the said aperture located therein and adapted to be forced bodily out of said aperture by the shank of a needle when passed therethrough, the materials of the said temporary closing device and the portion of the stopper surrounding the aperture being such that the stopper is held in said aperture by pressure due to the compression of such materials, and the material of said closing device being unaffected by and having no deleterious effect upon serum.

Witness my hand this 23d day of November, 1911, at the city of New York, in the county and State of New York.

WILLIAM H. PARK.

Witnesses:

WILLIAM R. BAIRD,
ALAN C. McDONNELL.