No. 850,322. PATENTED APR. 16, 1907.

H. W. EDEN.

RECEPTACLE FOR LIQUIDS.

APPLICATION FILED NOV. 26, 1906.

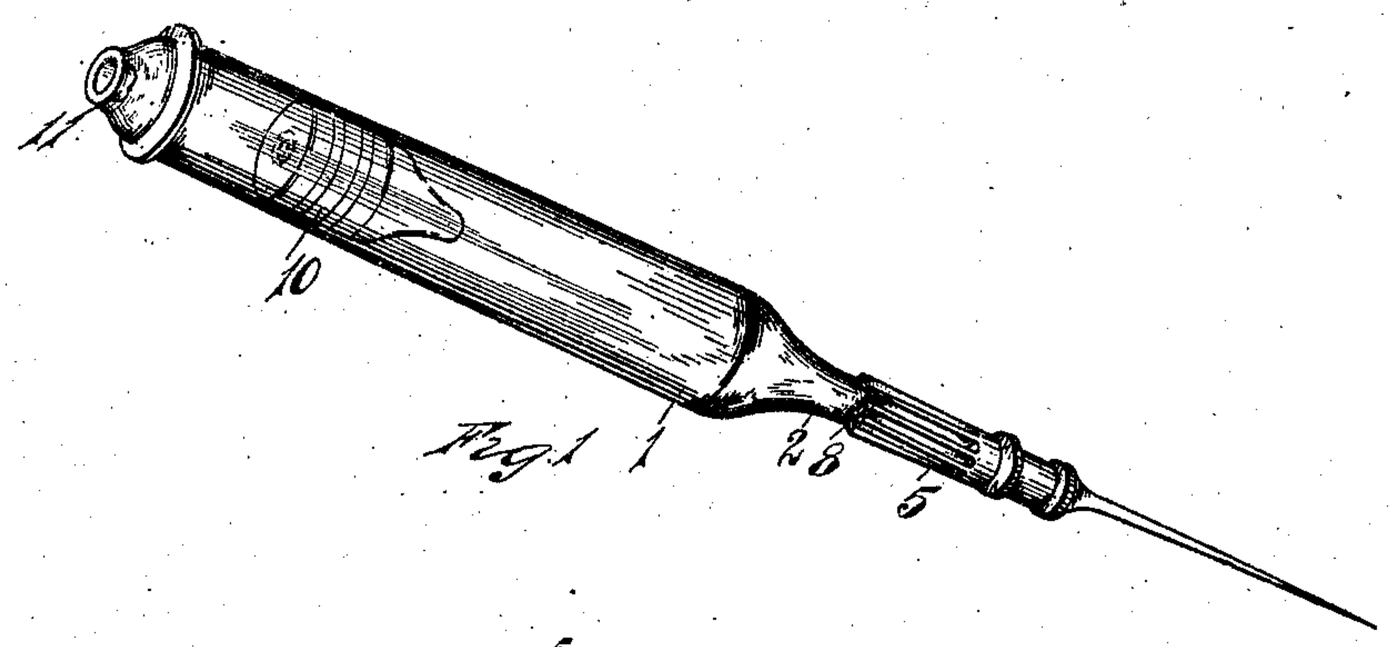

Fig. 1

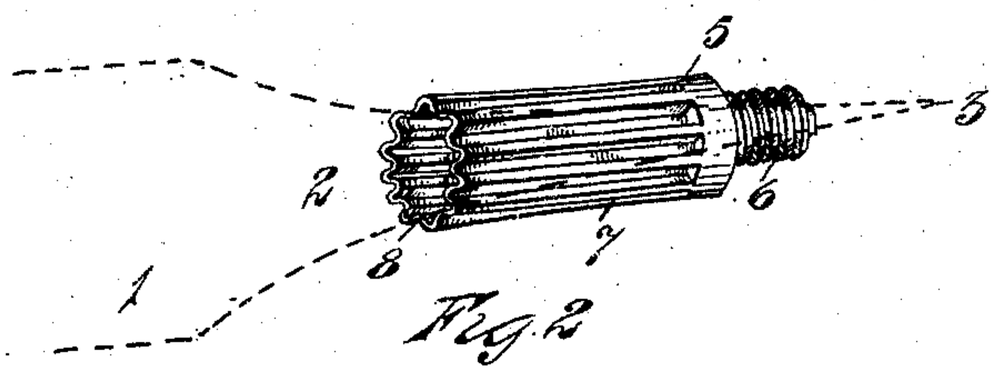

Fig. 2

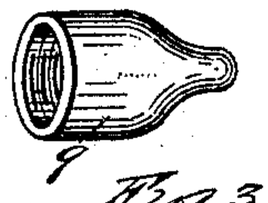

Fig. 3

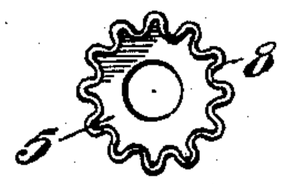

Fig. 4.

WITNESSES
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RECEPTACLE FOR LIQUIDS.

No. 850,822. Specification of Letters Patent. Patented April 16, 1907.

Application filed November 26, 1906. Serial No. 345,024.

To all whom it may concern:

Be it known that I, HAROLD W. EDEN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Receptacles for Liquids; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to receptacles for liquids. It has for its object an improved protective guard intended to be employed with glass receptacles that are closed by fire-sealing.

The object of the invention is to produce a guard which will accommodate itself to the irregular contour at the terminal of a glass tube that is drawn to a point and sealed in order to produce an hermetic sealing of the receptacle.

The article to which the guard is usually applied is one used to contain medical preparations that must be retained in an hermetically-closed receptacle and from which the medical preparation is driven forcibly at the time of use. It is a common practice in the marketing of the medical preparations known as "antitoxins" to store the fluid in a glass tube, one end of which is sealed, but provided with a breakable portion for the introduction therethrough of a rod which may engage with an inclined piston for the purpose of forcibly expelling the contents. The other end of the receptacle is drawn while the glass is in a heated and ductile condition to a conical terminal and the extreme point of the cone melted together or sealed together by a fire seal. The fine point thus produced is broken off when the contents of the receptacle are used, and through the small hole in the small pointed terminal that exists after the breaking off of the extreme point the fluid is expelled. Previous to the use of the medicine the small point must be protected from accidental breakage, as it is very easily broken, and this is done by slipping over the cone a metal guard, the free terminal of which is provided with a screw-thread for the engagement thereon of a cap that is prolonged either in the form of a hypodermic needle or that is closed entirely.

In the drawings, Figure 1 is a perspective of a receptacle with a guard protecting the pointed end and with a hypodermic needle attachment continuing the guard. Fig. 2 shows the guard on an enlarged scale. Its connections with the glass part of the receptacle is indicated by dotted lines. Fig. 3 shows a cap used in connection with Fig. 2. Fig. 4 is a cross-section through the corrugated part of the guard-piece and the tapering portion of the glass receptacle of Fig. 2.

The glass receptacle 1 is filled with liquid, the end of the glass heated and drawn to a long conical point 2, which is fire-sealed at its extreme end 3, leaving the extreme end of the chamber within the glass part of the receptacle slightly beyond the place at which the threaded end of the guard-cap 5 will extend. The guard 5 is made with a screw-terminal 6 and with an enlarged part 7, of thin material, and this material is corrugated longitudinally of the axis of the guard and is capable of considerable expansion at its open end 8 when forced onto the conical terminal 2 of the receptacle. The corrugations are filled with a proper cement and the guard forced onto the tube, the outer end expanding slightly and fitting itself to the irregularities of the glass tube, to which it adheres tightly and which is protected against accidental fracture along the delicate part at the point of the cone. The protection is completed by running onto the threaded part 6 an interiorly-threaded cap 9, which covers and protects the extreme end of the glass.

The receptacle is provided at its larger end with a sunken or concave part 11, through which a metal rod may be easily driven, and such a metal rod being driven through is pressed against the piston 10, which is contained within the receptacle. The extreme point 3 of the cone is broken off to produce an opening from the chamber, and the fluid may then be forced out as desired.

What I claim is—

1. A guard-cap for the frangible conical terminals of fluid-containing receptacles, having a screw-terminal for the engagement therewith of a cap, and a corrugated body part adapted to expand over and conform to the surface of the receptacle, substantially as described.

2. A guard-cap for the frangible discharge-terminal of a fluid-containing receptacle,

having a corrugated body portion adapted to be gently forced thereover, and a detachable cap serving as an end closure therefor, substantially as described.

3. A guard member for the frangible terminal of a fluid-containing receptacle, having a detachable cap and a corrugated body portion adapted to expansibly engage over a part of said receptacle, substantially as described.

4. In combination with a fluid-containing receptacle, a guard member having a slightly-expansible body portion adapted to engage over the discharge-terminal thereof, and a detachable guard-cap adapted to close the end of said guard member and said receptacle, substantially as described.

5. A guard-cap for the frangible terminal of a fluid-containing receptacle comprising a body portion adapted to expansibly engage thereover, and a terminal portion adapted to have attached to it an end-closure cap member or the complementary inner end of an injecting-needle, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses

HAROLD W. EDEN.

Witnesses:

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