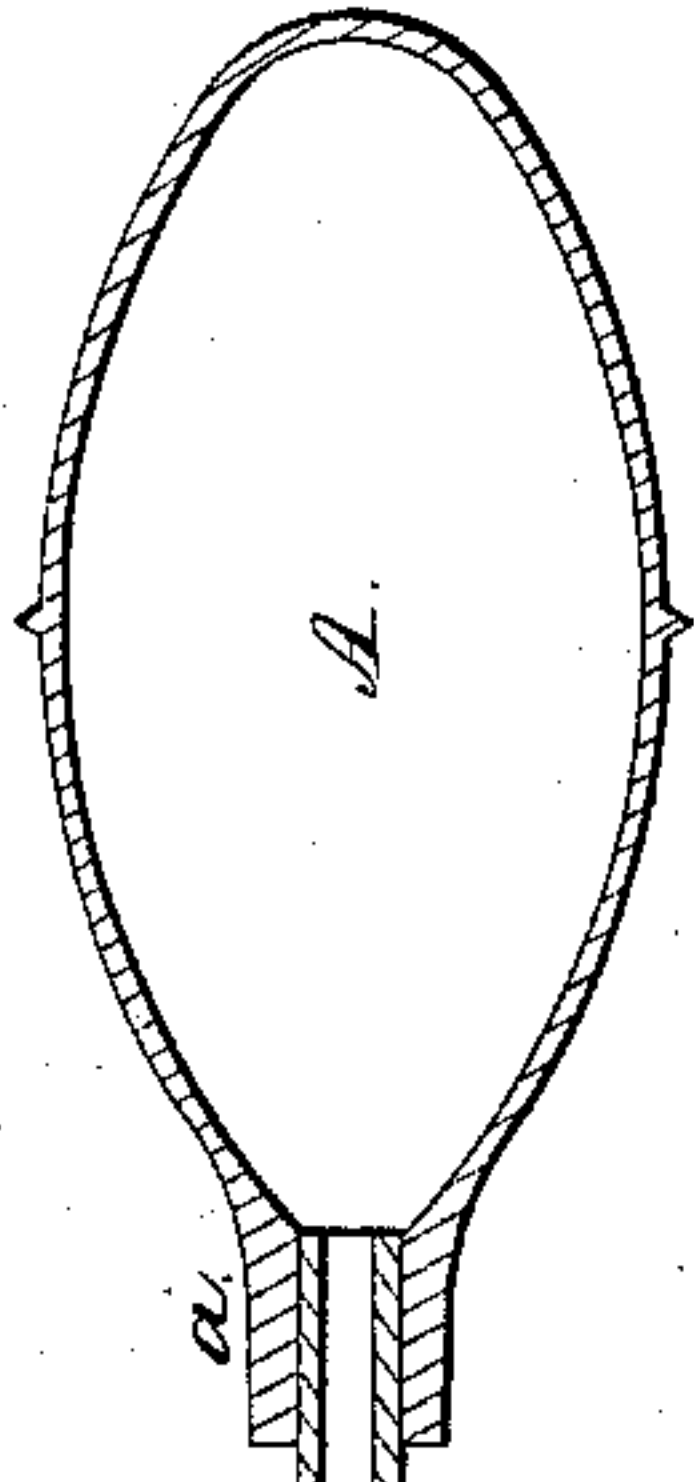


*D. Russell,*

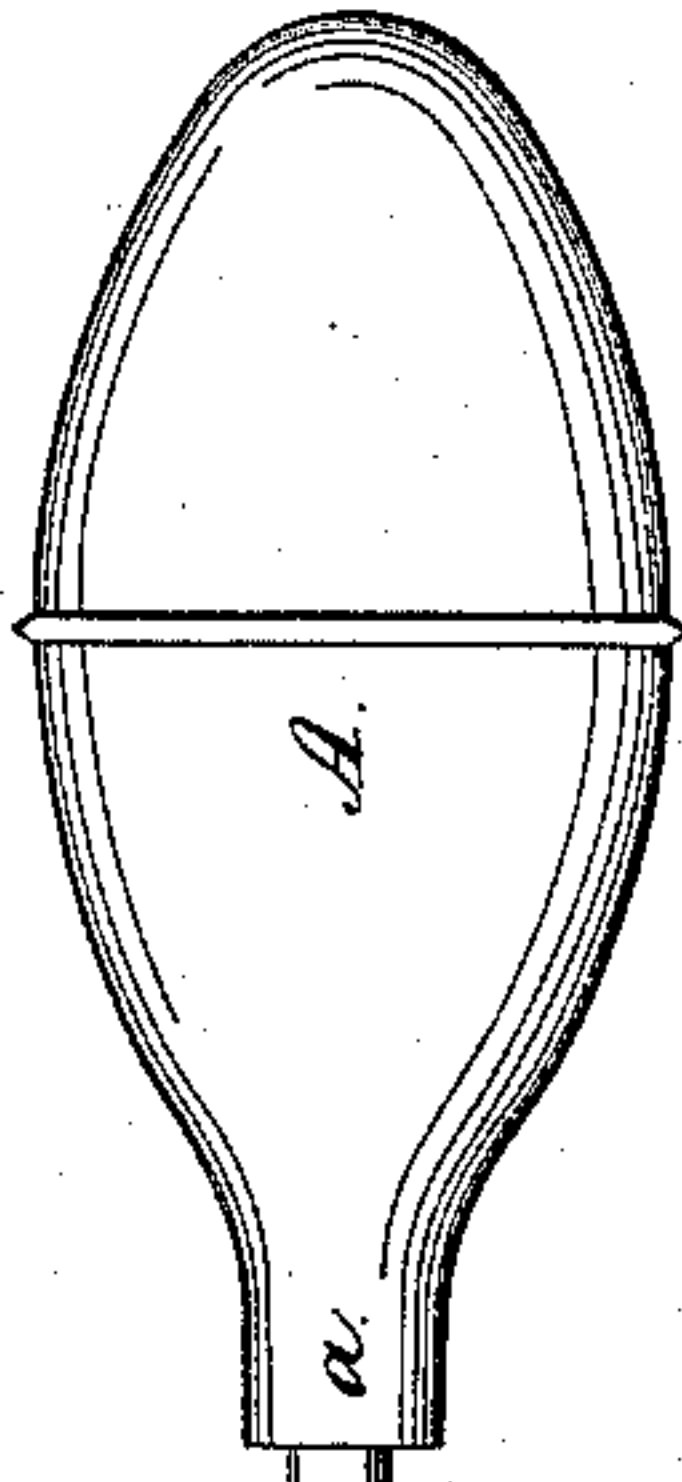
*Syringe.*

*N<sup>o</sup> 39,678.*

*Patented Aug. 25, 1863.*



*Fig. 2.*



*Fig. 1.*

*Witnesses.*

*R. H. Eddy*  
*C. P. Hale Jr.*

*Inventor.*

*Dwight Russell M.D.*

# UNITED STATES PATENT OFFICE.

DWIGHT RUSSELL, OF MILFORD, MASSACHUSETTS.

## IMPROVEMENT IN POWDER-INJECTORS.

Specification forming part of Letters Patent No. **39,678**, dated August 25, 1863.

*To all whom it may concern:*

Be it known that I, DWIGHT RUSSELL, M. D., a resident of Milford, in the county of Worcester and State of Massachusetts, have invented a new or improved powder-injector or apparatus for injecting medicaments in the state of powder into the throat or other passage of the human body for the cure or alleviation of disease or inflammation thereof; and I do hereby declare the same to be fully described in the following specification and illustrated in the accompanying drawings, of which—

Figure 1 is a side view, and Fig. 2, a longitudinal section, of it.

The nature of my invention consists of a new or improved powder-injector, as made of an elastic bulb, a flexible directing-tube or probe of the kind hereinafter described, and a jet and powder holding thimble or cap, or its equivalent, the whole being substantially as hereinafter specified.

In the drawings, A denotes the elastic bulb, which is a bottle or vessel made of india-rubber, or some composition of which the same is a material constituent, the said bulb being similar to what is used in the well-known elastic-bulb enema-syringe. Into the neck *a* of the bulb one end of a flexible conducting-tube, B, is inserted. This tube should be constructed of a material or materials such as will not only insure to it the necessary stiffness, but cause it to be flexible, or capable of being bent or curved into any desired shape, for the purpose of enabling the tube to be introduced into the throat or into the same, and a nasal passage, or into any other passage of the body into which, or on any part of the surface of which, it may be desirable to discharge a medicament in the state of powder. For such purpose the tube should not be flexible like the conducting-

tube of an enema-syringe, but should possess, with the power of being bent, a due degree of stiffness and ability to sufficiently retain the shape or curve into which it may be bent previous to being inserted in a passage. The powder-holding thimble or cap C (which should be made of silver or some other metal not readily corrosive) fits on the outer end of the tube B, and is provided at its extremity and sides with several jet-holes, *b b*, through which the powder to be used may be blown by the action of the elastic bulb. This cap or thimble should be large or long enough not only to fit so tightly and properly on the directing-tube as to maintain its place thereon while in use, but it should be of a sufficient capacity to contain all the powder which it may be desirable to use in it at any one time. By squeezing the elastic bulb quickly the air within it will be expelled through the directing-tube and the orifices of the powder-holding cap, and will carry with it more or less of the powder which may have been placed within the latter.

The instrument in question has been found to be of great service in diseases of the throat, nasal passages, vagina, uterus, and rectum, as by means of the flexible probe it may be easily adapted to any accessible passage or passages of the human body and introduced therein.

I claim as my invention—

The new or improved powder-injector, as made of an elastic bulb, a flexible probe of the kind described, and a jet and powder holding thimble or cap, or its equivalent, the whole being substantially as hereinbefore specified.

DWIGHT RUSSELL.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.