

No. 741,886.

PATENTED OCT. 20, 1903

W. H. CHANDLER.

VACCINE TUBE.

APPLICATION FILED JAN. 21, 1903.

NO MODEL.

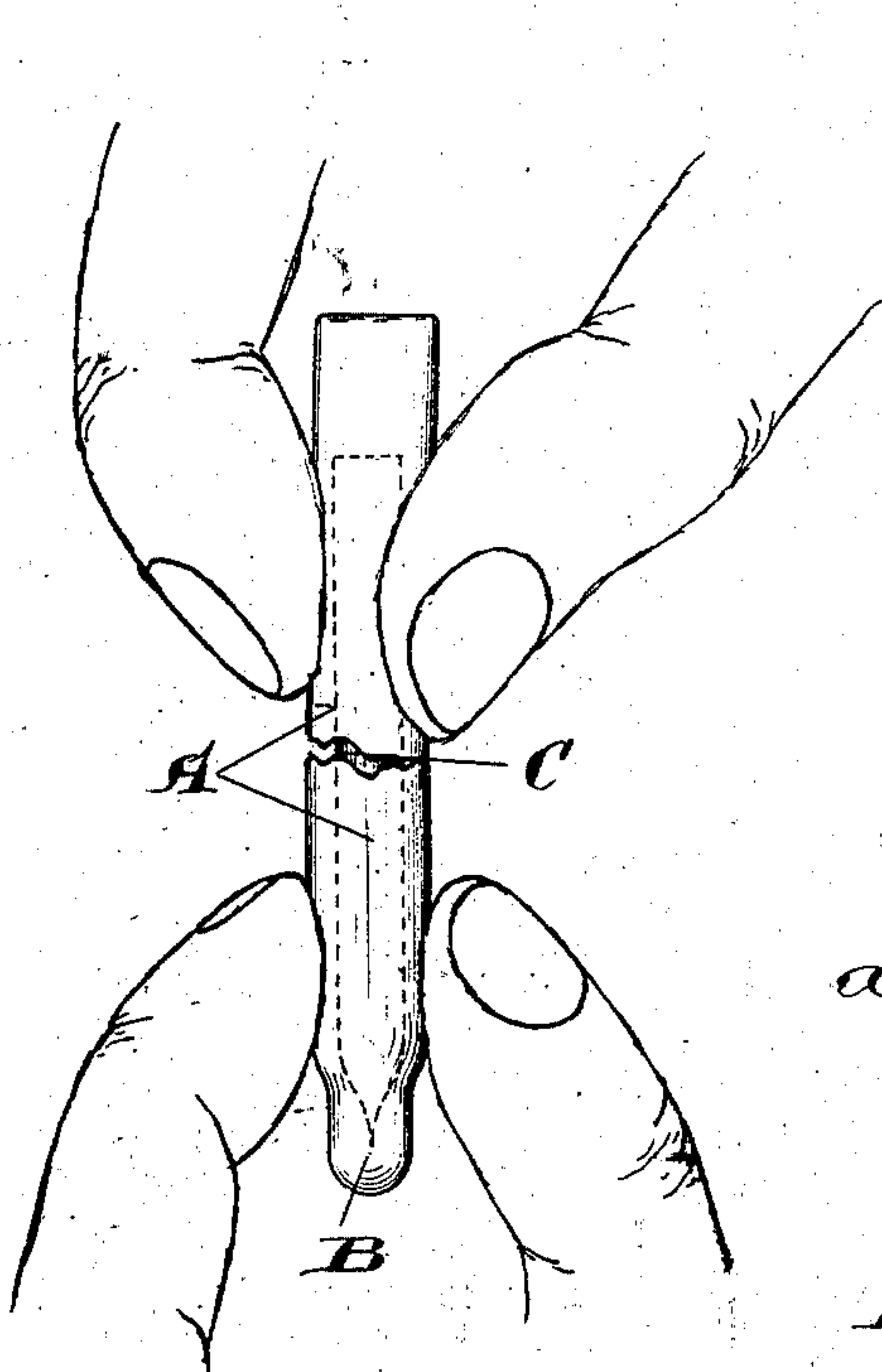
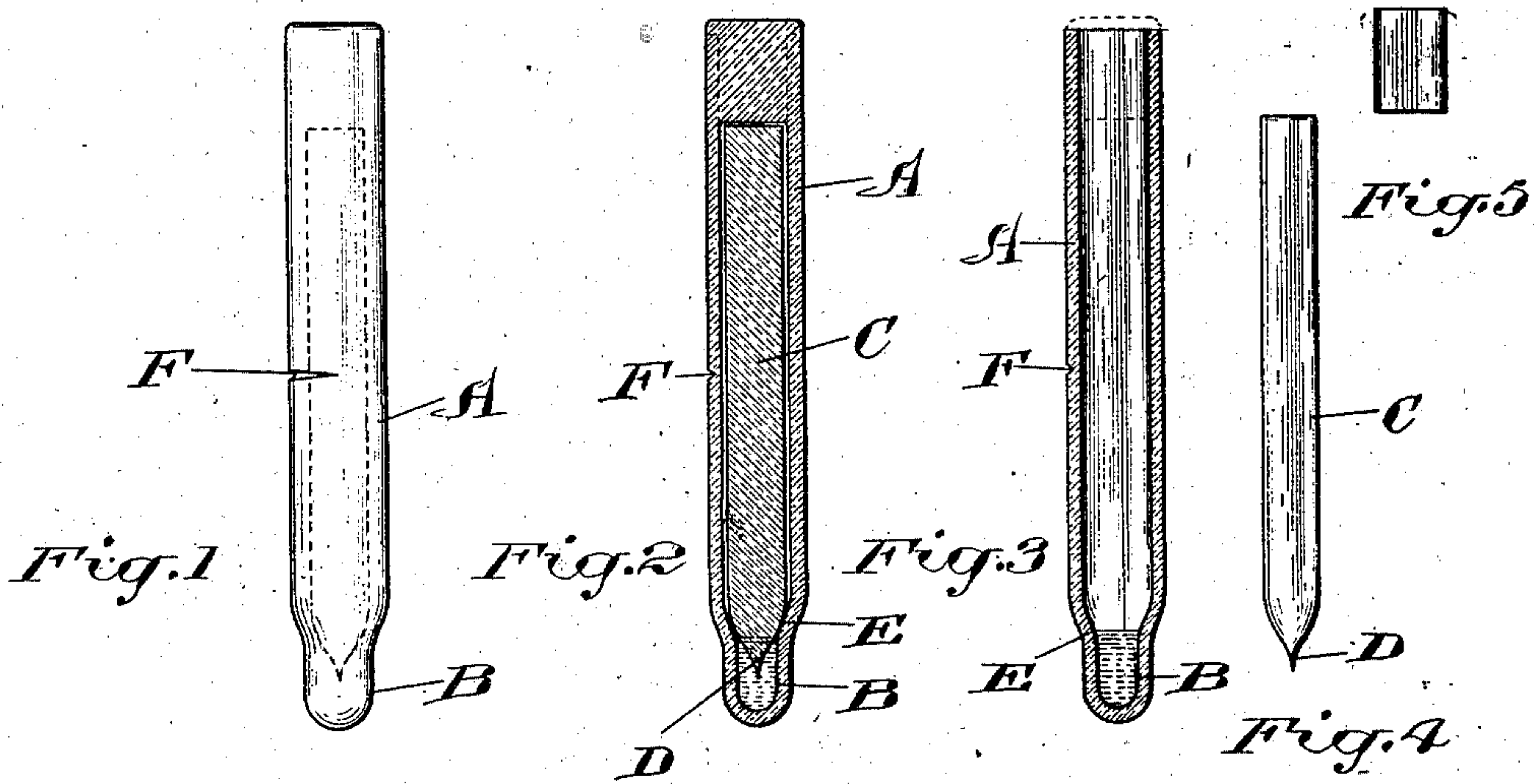


Fig. 6

Witnesses  
George B. Maclean  
Andrew A. Adams

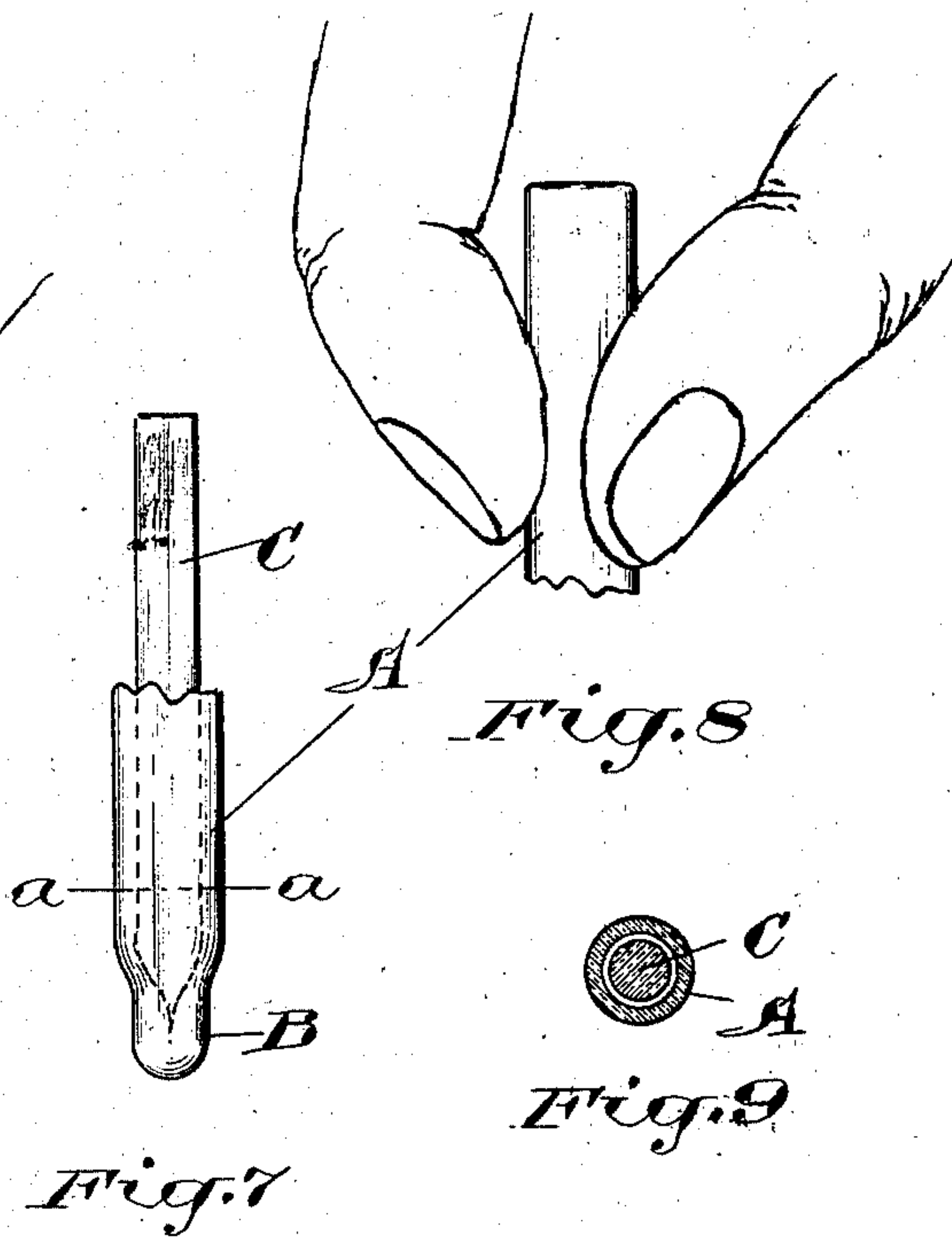


Fig. 7

Fig. 9

Inventor  
Walter Howard Chandler  
by Smith & Barnes  
his attorneys.



# UNITED STATES PATENT OFFICE.

WALTER H. CHANDLER, OF TORONTO, CANADA.

## VACCINE-TUBE.

SPECIFICATION forming part of Letters Patent No. 741,886, dated October 20, 1903.

Application filed January 21, 1903. Serial No. 139,939. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER HOWARD CHANDLER, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented a new and useful Vaccine-Tube, of which the following is a specification.

My invention relates to the construction of a receptacle for the purpose of containing vaccine, together with a scarifier, in an absolutely hermetically sealed, germ-proof, and aseptic glass tube.

The objects are, first, to provide a means whereby a desired amount of vaccine may be put up in a convenient tube; secondly, to seal the tube so that the air is prevented from coming in contact with the vaccine except when opened for use. By hermetically sealing the tube after the vaccine, together with a scarifier, is inserted I prevent the air from coming in contact with the vaccine, thereby preventing germ and atmospherical bodies from effecting a deteriorating change. I also construct the tube so that it can be readily separated by the fingers, and I facilitate the means of getting at the vaccine and the scarifier, which will always be preserved in a perfectly clean and ready-for-operating condition. I attain these objects by the invention as illustrated in the accompanying drawings, in which—

Figure 1 is a view of the complete tube. Fig. 2 is a sectional view through the tube and scarifier. Fig. 3 is a sectional view of the tube, showing the tube before the plug is fitted in the top. Fig. 4 is a view of the scarifier. Fig. 5 is a view of a plug as fitted in tube. Fig. 6 is a view of tube, showing the fingers separating the tube. Fig. 7 is a view showing the tube separated and the upper part removed. Fig. 8 is a view of the removed upper half of tube. Fig. 9 is a sectional view through the tube and scarifier on lines *a a*, Fig. 7.

Similar letters refer to similar parts throughout the specification and drawings.

The vaccine-tube A is formed from a piece of glass tubing of any desired length and diameter and terminates in a vaccine-well B of slightly lesser diameter than the tube A. Placed in the tube A is the scarifier C, which

consists of a circular piece of glass of a desired length and suitable diameter and terminates in a conical point D. Formed by the narrowing of the well B from the tube A is a circular seat E, on which the point of the scarifier C rests and is prevented from striking against the bottom of the well, which obviates the possibilities of the point D becoming chipped, also prevents the tube becoming broken from concussion, and also leaves a space for the vaccine fluid. Ground in the side of the tube is a nick F for the purpose of weakening the tube, so that it can be easily separated by the fingers. To separate the tube and get access to the scarifier and vaccine, each half of the tube A from the nick F is taken between the thumb and first finger of each hand, and the ends are pressed inwardly, as in the act of bending and as shown in Fig. 6 of the drawings, when the tube B will readily separate, breaking at the nick F, which will be the weakest point in the tube. The upper part of the tube is hermetically closed by a plug inserted into the tube, the integration being effected by molten glass.

In making up the vaccine-tube the vaccine fluid is simply poured into the well. Then the scarifier is dropped into the receptacle part of the tube, the point of the scarifier dipping into the vaccine fluid. In hermetically sealing the tube a glass plug is inserted into the open end of the tube. The end is then fused, thus forming a plug integrally with the tube.

What I claim as new, and desire to secure by Letters Patent, is—

1. A vaccine-tube and scarifier receptacle consisting of a glass tube of any desired length and diameter, one end of said tube narrowing in diameter and forming a well, a scarifier of a suitable shape, terminating in a point contained in receptacle part of said tube, the point of said scarifier ending in said well, the vaccine and scarifier hermetically sealed in said tube, substantially as specified.

2. A vaccine-tube and scarifier receptacle consisting of a glass tube of any desired length and diameter, one end of said tube narrowing and forming a well, a scarifier of



a suitable shape and terminating in a point  
contained in the receptacle part of said tube,  
the pointed end of said scarifier ending in  
said well, a desired amount of vaccine fluid  
5 contained in said well, the center part of  
said tube being partially nicked through to  
weaken said tube, said vaccine and scarifier

hermetically sealed in said tube, substan-  
tially as specified..

Dated at Toronto November 21, 1902.

W. H. CHANDLER.

Witnesses:

C. J. GIBSON,

W. A. SADLER.