No. 652,999. Patented July 3, 1900.

L. A. DENIS.

VACCINATING INSTRUMENT.

(Application filed Jan. 31, 1899.)

(No Model.)

Fig. 1.

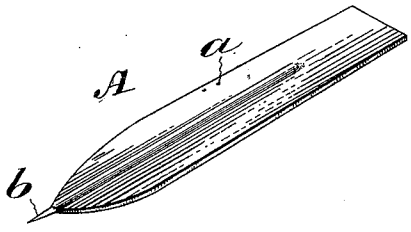


Fig. 2.

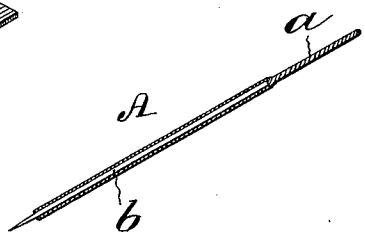


Fig. 4.

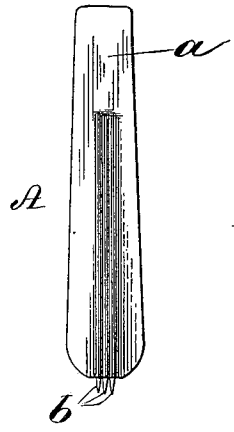
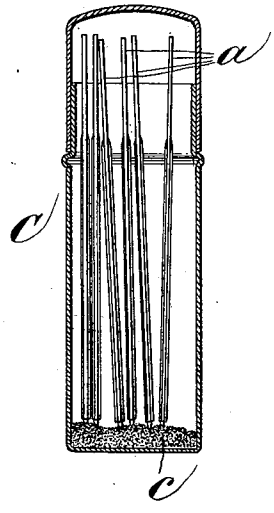


Fig. 3.



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VACCINATING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 652,999, dated July 3, 1900.

Application filed January 31, 1899. Serial No. 703,967. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. DENIS, a citizen of the United States, residing at West Hoboken, Hudson county, New Jersey, have invented certain new and useful Improvements in Vaccinating Instruments, of which the following is a specification.

This invention relates to devices used by physicians for vaccinating. Ordinarily a physician employs in this operation a scarifier and a vaccine-point. The scarifier is ordinarily a lancet with a blade, and the "point" is sometimes a slip of bone or ivory with a little of the virus or vaccine matter dried thereon and sometimes it is a capillary glass tube containing the virus in a liquid state. Where a number of vaccinations are to be made, there is a liability of grave danger to the patient in using the scarifier on different persons without carefully sterilizing it after each operation, and it is not convenient to do this at all times and under all circumstances. To overcome this difficulty and to provide a simple means of avoiding altogether the risk of infection is the object of the present invention, which consists, essentially, in combining in one vaccinating instrument a vaccine-point and scarifier of such a simple and inexpensive construction that after once using it the instrument is discarded or thrown away.

The accompanying drawings illustrate an embodiment of the invention drawn to a large scale in order to show the construction clearly.

Figure 1 is a perspective view of the improved vaccinating instrument, and Fig. 2 is a longitudinal mid-section of the same. Fig. 3 is a sectional view of a sterilizing box or case to hold the instruments. Fig. 4 shows a slightly-different construction of the instrument.

The instrument A consists of a flat vaccine-point *a*, made of thin stiff material and somewhat pointed at one end, and a scarifier *b*, in the nature of a sharp steel needle secured in the vaccine-point *a*, with its sharp tip or extremity projecting therefrom, as clearly shown.

The vaccine-point *a* will be of some relatively-inexpensive material which resists change or corrosion to a good degree and preferably of celluloid or other pyroxylin compound. This material has an advantage in that it may be molded plastically about the shank or body of the scarifier *b*, as shown, so as to hold the latter firmly, and in that it is not corrodible under the conditions to which it is likely to be subjected for this use or in this art. Moreover, when used in such small quantity the cost of the material is not very important. Other materials, however, might be used—as, for example, some forms of gelatin, especially when rendered insoluble, aluminium, bone, or the like.

The instruments constructed as described have a little of the vaccine-virus applied to them near their tips where the needle protrudes, and this virus is allowed to dry. They are then placed with the needle-points down in a pocket-case C, Fig. 3, containing in its bottom a bit of some absorbent material *c* charged with a sterilizing agent. The case C may be a simple cylindrical sheet-metal box with a slip cover, and the substance *c* may be cotton, sponge or the like, or cork. This soft substance protects the points of the needles and may be saturated with formaldehyde, carbolic acid, or other sterilizing agent.

The manner of using the vaccinating instrument is very simple. The operator takes an instrument from the case or holder and scratches or abrades the skin with the scarifier in such a way as to draw a little lymph and blood and then applies the vaccine-virus to the wound, the lymph and blood or wetting with water serving to moisten the dried virus. After using the instrument on one patient the operator discards it or burns it and uses a fresh one on the next patient.

The point *a* may be quite thin, so that a considerable number can be put in a small box or case and it serves as a handle for the scarifier.

Fig. 4 shows how a plurality of needles *b* may be used in the scarifier, if preferred.

Having thus described my invention, I claim—

As a new article of manufacture, a vacci-

nating instrument consisting of a flat, thin, elongated piece *a*, of celluloid or the like, and a needle-like scarifier *b*, having its body portion embedded in the mass of the piece *a*, and its sharp extremity projecting slightly beyond the extremity of the piece *a*, substantially as set forth.

In witness whereof I have hereunto signed my name, this 27th day of January, 1899, in the presence of two subscribing witnesses.

LOUIS A. DENIS.

Witnesses:
HENRY CONNETT,
PETER A. ROSS.