H. Minton,

Vaccinator,

No. 55,521. Patented June 12, 1866.

Fig. 3

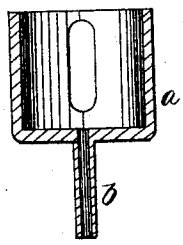


Fig. 4.

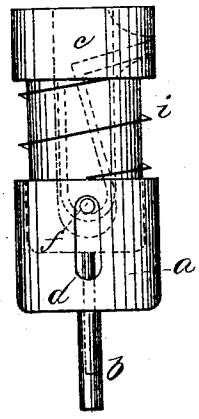


Fig. 5.

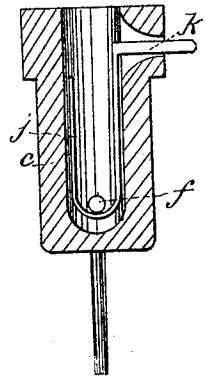


Fig. 1

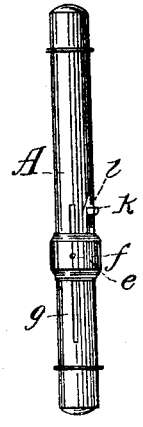
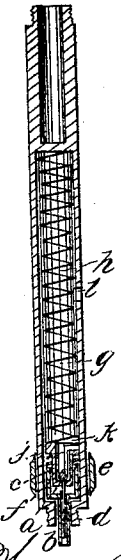


Fig. 2.



Witnesses.

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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

HENRY MINTON, M. D., OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VACCINATORS.

Specification forming part of Letters Patent No. **55,521**, dated June 12, 1866.

To all whom it may concern:

Be it known that I HENRY MINTON, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Vaccinator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a longitudinal central section of the same. Fig. 3, 4, and 5 are details in a larger scale than the previous figures.

Similar letters of reference indicate corresponding parts.

This invention consists in the arrangement of a puncturing-tube in a barrel which contains a spring, in combination with a plunger passing through the puncturing-tube and provided with a moventum-spring in such a manner that when the punctering-tube is filled with the vaccinating-matter and drawn back in the barrel against the action of the spring contained therein, and then released after the barrel has been placed on the spot where the vaccinating-matter is to be introduced, the tube overcoming the power of the momentum-spring, punctures the skin, and the plunger flies out, and causes the matter contained in the puncturing-tube to discharge into the wound opened by said tube.

A represents a barrel made of sheet metal or any other suitable material, and arranged to receive the head *a*, which carries the puncturing-tube *b*. Said head is bored out to receive the head *c*, which carries the plunger *d*, as clearly shown in Figs 1 and 4 of the drawings, and both heads *a* and *c* are connected by a pin, *f*, to a sleeve, *e*, which slides on the barrel, said barrel being provided with slots *g*, in which the pin *f* moves.

A spring, *h*, which bears on the inner end of the head *c* of the plunger, has a tendency to force the plunger and the puncturing-tube out to the position shown in Fig. 2 of the drawings, and a spring, *i*, which is interposed between the heads *a* and *c*, holds the plunger back, so that it does not pass clear through the puncturing-tube.

In the interior of the head *c* is situated a trigger-spring, *j*, provided with a trigger, *k*, said spring being retained by the pin *f*, which connects the heads *a* and *c* with the sleeve *e;* and if the sleeve is moved back against the action of the spring *h*, the trigger catches in a slot, *l*, in the barrel and retains the puncturing-tube and plunger, and by pressing on the trigger said tube and plunger are suddenly released and caused to fly back to their original position, with that exception that when the motion of the head *a* is suddenly arrested as the same strikes the end of the barrel the head *c*, impelled by its momentum, compresses the spring *i*, and causes the plunger to fly out clear through the puncturing-tube and then back to its original position.

When the vaccinator is to be used, the puncturing-tube is to be filled with the vaccinating-matter, and the sleeve is moved back on the barrel until the trigger catches in the slot *l*. The barrel is then placed over the spot which is to receive the vaccinating-matter, and by pressing on the trigger the puncturing-tube is made to fly out and to pierce the skin. At the same time the plunger, being impelled by its momentum, passes clear through the puncturing-tube and forces the vaccinating-matter into the wound.

By this instrument the operation of vaccinating is rendered sure and easy, and it can be executed without danger by persons of ordinary mechanical skill.

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

The puncturing-tube *b* and plunger *d*, in combination with the springs *h i*, trigger *k*, and barrel A, constructed and operating substantially as and for the purpose described.

HENRY MINTON, M. D.

Witnesses:

WM. F. MCNAMARA,

W. HAUFF.