M. Delluc,

Lancet.

No. 7,341. Patented May 7, 1850.

Fig. 5.

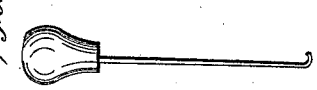
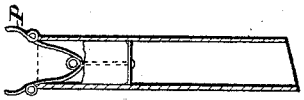


Fig. 4.



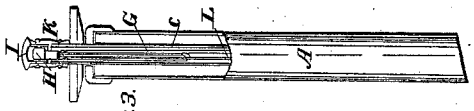


Fig. 3.

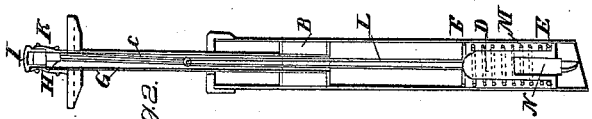


Fig. 2.

Fig. 6.

Fig. 7.

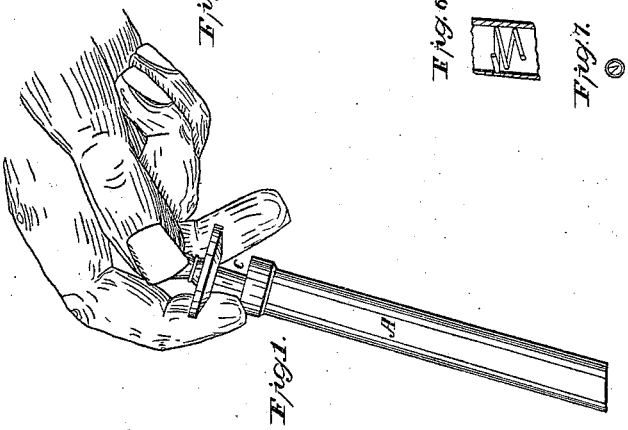


Fig. 1.

UNITED STATES PATENT OFFICE.

MARCELLIN DELLUC, OF NEW YORK, N. Y.

MECHANICAL LEECH.

Specification of Letters Patent No. 7,341, dated May 7, 1850.

To all whom it may concern:

Be it known that I, MARCELLIN DELLUC, of the city, county, and State of New York, have invented a new and useful machine called the mechanical leech for the purpose of bleeding certain portions of the body instead of making use of leeches; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, is a longitudinal section of the instrument. Fig. 3, another longitudinal section of the instrument. Fig. 4, a section of the pump. Fig. 5, a handle to manage the pump. Fig. 6, shows the attachment of the spring to the tube.

The nature of my invention consists in the construction of two instruments, the first designed to create a vacuum upon the skin and to pierce it with a lancet shaped like the letter V pressed smartly by a spring; the second, intended to be placed upon the puncture thus made, draw the blood by making a vacuum like a pump.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

The first instrument intended to make the puncture is composed of a tube A, in which moves a piston B, by means of a hollow piston rod C. In the lower part of the instrument is placed a cylinder D, attached by means of solder to a spiral spring at the point E, while this spring is fixed to the tube A at the point F by means of solder through two small holes in the tube as shown in Fig. 6. The cylinder D, has upon it a rod of iron wire which passes through the piston, and interlocks with a second rod G, on the upper end of which is a brass button H. A little cover I is attached to the piston rod by a tube of india rubber K, in such a manner as to exclude the air.

The instrument being placed upon the part to be bled and held as shown in Fig. 1, the interior portions of the instrument are in the position shown in Fig. 3, and by pressing upon the cover I with the thumb the button H rests upon the piston rod as seen in Fig. 2, then, by drawing up the piston rod, it rises and a vacuum being made in the tube A, the skin swells under the tube. When the piston arrives at the place indicated by Fig. 2 the wire G begins to draw with it the second wire L and the cylinder D, and the spring placed at M, contracts half its length. When it reaches this point a strong resistance is felt. The thumb is then taken off and the button H being then set at liberty, the cylinder D is drawn back by the spring, and the lancet descends briskly, this cylinder yielding to the force of the pressure passes beyond its usual position and the lancet is then impelled far enough to pierce the skin of any patient. The depth of the puncture is regulated by causing the little cylinder N, which carries the blades and which is screwed into the cylinder D to descend more or less as may be required.

The blades are shaped like the letter V as indicated in the little figure O. This form being necessary in order that the puncture shall not close immediately. The puncture being made, the instrument is taken off, and replaced by the tube Fig. 4, in which the piston is pushed down its whole length. Pressing the instrument upon the skin with one hand, the piston is drawn by the handle, indicated Fig. 5, so that the spring P, Q hooks upon the tube and prevents it from descending.

To make the piston descend to recommence the operation, it is sufficient to press the spring P, Q, with the fingers of one hand, and the piston with the handle in the other hand.

What I claim as my invention and desire to secure by Letters Patent is—

1. The arrangement of the wire G and L, of the button H and of the covering of the instrument I connected with the piston rod by the india rubber tube K, which allows the cylinder D placed in the vacuum produced by the piston, to work without admitting the air.

2. The blades of the lancet shaped like a V.

M. DELLUC.

Witnesses:

V. BEAUMONT,

CHAS. T. GARDNER.