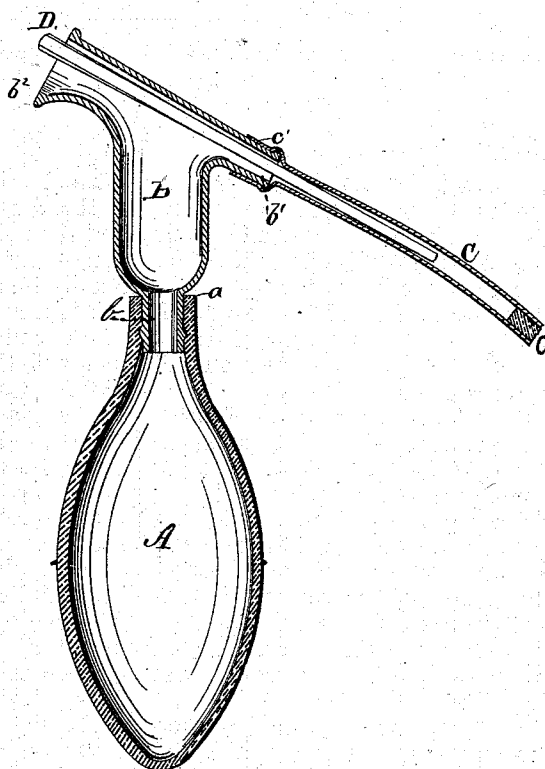


F. F. McDONALD.
ARTIFICIAL LEECH.

No. 186,592.

Patented Jan. 23, 1877.



WITNESSES:

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FLOYD F. McDONALD, OF BLACKSBURG, VIRGINIA.

IMPROVEMENT IN ARTIFICIAL LEECHES.

Specification forming part of Letters Patent No. **186,592**, dated January 23, 1877; application filed November 29, 1876.

To all whom it may concern :

Be it known that I, FLOYD F. McDONALD, of Blacksburg, in the county of Montgomery and State of Virginia, have invented a new and Improved Artificial Leech; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a sectional view.

The invention relates to that class of medical instruments that are intended to subserve the purpose of an ordinary leech, and extract blood from some part of the human body. It consists in bringing together an elastic bag or bulb, by which a vacuum may be produced; a glass, metallic, or other tube of T shape, provided with an opening at each of its three ends; a lancet or knife; and an elastic sheath for the knife, all connected and arranged, with respect to each other, as hereinafter more fully described.

A represents the elastic bulb, made preferably of oval or egg shape, and from rubber or analogous material, the same being provided with the mouth *a*, that may be readily sprung over the end *b* of the T-tube. B. C is a small elastic tube, closed at the end *c*, and at the end *c'* sprung over the end *b'* of the T-tube. D is a knife, preferably made at one end flat, and sharp on both edges. This is inserted, blunt end foremost, through the ends *b¹ b²* of the T-tube, into the small rubber tube C.

The operation is as follows: The rubber

bag or bulb is compressed, and so held until the end *b²* is secured firmly against the part of the body from which blood is to be drawn, and then allowed to expand itself. The knife is now pushed forward until a cut is made, and by turning the knife a quarter-revolution the first may be crossed with a similar cut. The vacuum which has been created in the bag will then produce the desired flow of blood.

The glass or metal tube may, if thought proper, indicate, by figures, the quantity of blood drawn by one or more natural leeches.

This artificial leech has the advantage over the natural one, that while it makes the cross-incisions and draws the blood in the same manner, they may be made so shallow that any child can be operated on without danger of hemorrhage. On the other hand, the cuts may be extended to any requisite depth, to meet the peculiar demands of the case, so as to draw a maximum quantity of blood.

Having thus described my invention, what I claim as new is—

An artificial leech, consisting of an elastic bulb open at upper end, a T-tube open at its three ends, a small tube open at one end, and a knife, all connected, constructed, and arranged substantially as shown and described.

FLOYD F. McDONALD.

Witnesses:

GILES D. THOMAS,
JOHN L. EAKIN.