Stahlmann & Smith,

Mechanical Leech.

No. 100,210. Patented Feb. 22. 1870.

Fig. 1.

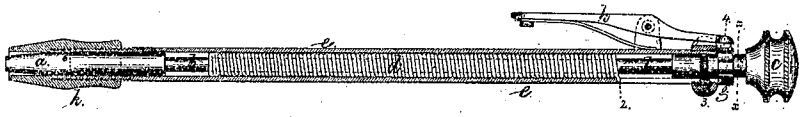
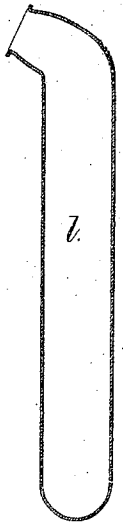


Fig. 2.

Fig. 3.

Fig. 4.



Witnesses,

Chas. H. Smith

Geo. D. Walker

Andrew H. Smith

Fred. A. Stahlmann

United States Patent Office.

FREDERICK A. STOHLMANN, OF BROOKLYN, AND ANDREW H. SMITH, OF NEW YORK, N. Y., ASSIGNORS TO FREDERICK A. STOHLMANN.

Letters Patent No. 100,210, *dated February* 22. 1870.

IMPROVEMENT IN MECHANICAL LEECHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern.

Be it known that we, FREDERICK A. STOHLMANN, of Brooklyn, Kings county, New York, and ANDREW H. SMITH, of the city and State of New York, have invented and made a Mechanical Leech; and the following is declared to be a full description thereof.

Our invention consists in a tubular scarifier rotated by a spring, when brought into operation by releasing a trigger; and the scarifier is prepared for operation by winding it up against the action of said spring, and regulating the depth of cut by a thimble through which the scarifier projects.

In the drawing—

Figure 1 is a longitudinal section of the scarifier-case, the scarifier and its rod being in elevation;

Figure 2 is a cross-section at the line $x\,x$; and

Figures 3 and 4 are longitudinal sections of the exhausting-tubes.

The scarifier *a* is formed of a tube with a sharpened end set upon a rod *b*, that extends through to the head *c*, and around the rod *b* is a helical spring, *d*, that is attached at one end to the rod *b*, and at the other end the wire of the spring projects into and is held by the slot or mortise in the case *e*, as seen at 2.

This case *e* incloses the scarifier and rod *b*, the parts being retained by the screw 3 entering a neck in the rod *b*.

Around the rod *b* is a ratchet-wheel, *g*, and a lever, *h*, and pawl 4 are provided to hold the rod *b* and the scarifier when wound up, by means of the head *c*, against the action of the spring *d*.

The tube or case *e* has a screw-thimble, *k*, around the scarifier *a*, so as to adjust the distance the scarifier projects and gauge the depth of cut.

It will now be understood that the scarifier *a* is applied to the proper part of the person after the parts have been wound up as aforesaid, and then, by touching the lever *h*, the pawl 4 is drawn back and the uncoiling of the spring *d* rotates the scarifier *a*, making the necessary incision.

One of the exhausting-tubes, *l*, is prepared by introducing a few drops of ether or similar material, and inserting the same in hot water, so that the ether will boil and its vapors expel the atmosphere, the mouth of the tube is to be applied over the incision and the ether vapors condensing produce a sufficient vacuum to cause the tube to adhere and draw the blood similarly to a leech, but more rapidly and reliably.

The tube *l* may be of any desired size, and the mouth be made at the end, as in fig. 3, or at the side as in fig. 4.

We claim as our invention—

1. The rotating tubular scarifier *a*, rod *b*, and spring *d*, in combination with the head *c*, trigger *h*, and case *e*, substantially as specified.

2 In combination with the foregoing, the screw-thimble *k*, to adjust the depth of cut, as specified.

Dated November 23d, A. D, 1869.

ANDREW H. SMITH.
FREDK. A. STOHLMANN.

Witnesses:
CHAS. H. SMITH,
GEO. T. PINCKNEY.