

W. I. ALVORD.
Surgical Dilator.

No. 207,932.

Patented Sept. 10, 1878.

Fig. 1.



Fig. 3.

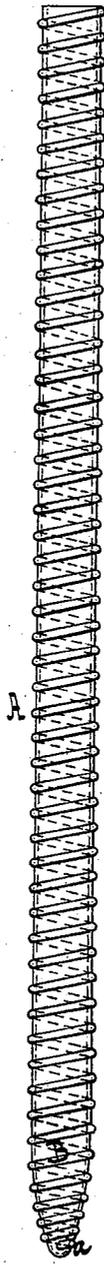


Fig. 4.

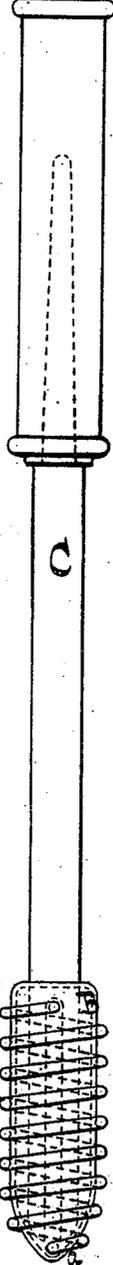


Fig. 7.

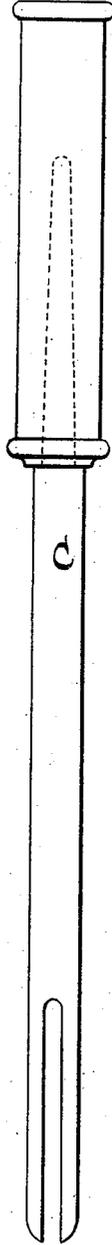


Fig. 2.



Fig. 5.

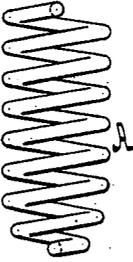


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLISTON ISAAC ALVORD, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN SURGICAL DILATORS.

Specification forming part of Letters Patent No. 207,932, dated September 10, 1873; application filed October 4, 1876.

To all whom it may concern:

Be it known that I, WILLISTON ISAAC ALVORD, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Surgical Dilator, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

This invention relates to an improved dilator for surgical purposes, its object being to provide an instrument that may be more easily applied, and with less pain to the patient than such instruments as heretofore constructed; and to this end it consists in a dilator consisting of a metal spiral having a tapering rounded end, within which is arranged a solid filling-piece having a shape corresponding to the internal area of the said rounded end, as hereinafter more fully set forth.

In the drawings, Figure 1 represents an elevation of my improved dilator, and Fig. 2 a detached view of the filling. Fig. 3 represents a modification, in which the filler extends throughout the dilator; and Figs. 4, 5, 6, and 7 represent a modified form of the dilator, to be employed when said dilator is to remain for some time in position.

The letter A represents a spiral of suitable length, composed of a metallic wire, and formed with a rounded tapering end, as shown. The letter B represents the filler, shaped to correspond with the interior configuration of the spiral.

In the form shown in Fig. 1, the filler B is

of such length as to form a support for the extreme end or rounded end, as shown, leaving the body of the dilator flexible; but in the modification shown in Fig. 2 it extends throughout the spiral, in order to form a rigid dilator, which is useful in some cases.

In the modification shown in Figs. 5 and 6, both the spiral and the filler consist simply of short sections, the filler being made hollow for the reception of a removable handle, C, by means of which the dilator may be placed in position, after which said handle may be withdrawn, so as to leave the dilator in place when it is required, as in some cases, to remain in position for some time.

The dilator is applied by giving it a gentle rotary motion, the spiral causing it to advance slowly in position, rendering it much more convenient and painless in use when applied to the strictured or contracted part than this class of instruments as heretofore constructed.

What I claim is—

A dilator consisting of a metal spiral having a tapering or rounded end, within which is arranged a solid filling-piece having a shape corresponding to the inner area of said rounded end, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 26th day of September, 1876.

W. I. ALVORD. [L. s.]

Witnesses:

JOHN H. WELLS,
HENRY F. GOODWIN.