

939,035.

Patented Nov. 2, 1909.

Fig. 3.

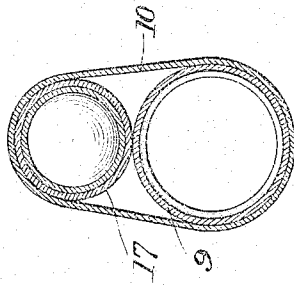


Fig. 2.

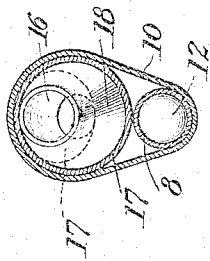
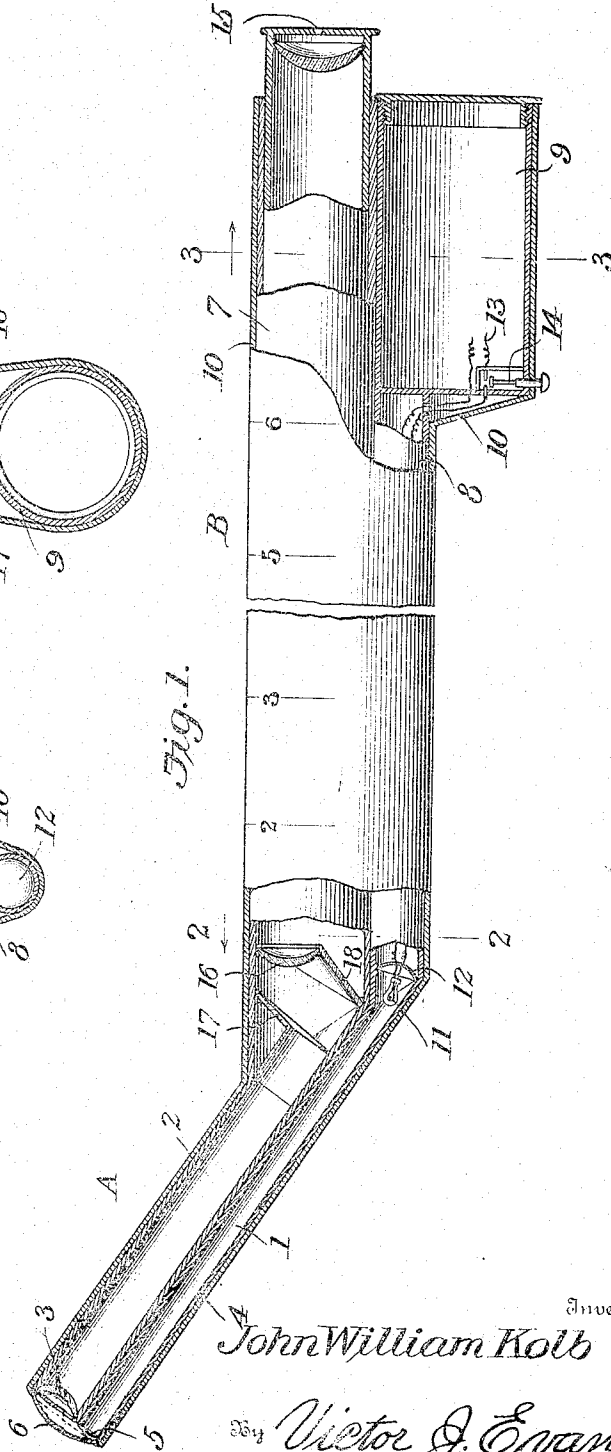


Fig. 1.



Witnesses
Anton S. Bell
U. B. Hillyard

Inventor
John William Kolb

By *Victor J. Evans*
 Attorney

UNITED STATES PATENT OFFICE.

JOHN WILLIAM KOLB, OF MEDICINE LODGE, KANSAS.

SURGICAL INSTRUMENT.

939,035.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed June 5, 1909. Serial No. 509,254.

To all whom it may concern:

Be it known that I, JOHN WILLIAM KOLB, a citizen of the United States, residing at Medicine Lodge, in the county of Barber and State of Kansas, have invented new and useful Improvements in Surgical Instruments, of which the following is a specification.

The purpose of this invention is to supply an instrument to facilitate the labor of physicians when making examinations to determine the conditions of subjects or patients, the instrument being specially designed for obstetrical work and to overcome as nearly as practicable the annoyance and discomfort generally experienced alike both by the subject and the physician or veterinarian during the examination.

The invention consists of the novel features, details of construction and combinations of parts which hereinafter will be more particularly set forth, illustrated in the accompanying drawings and pointed out in the appended claims.

Referring to the drawings forming a part of the specifications: Figure 1 is a side view of an instrument embodying the invention parts being broken away to show more clearly the relative arrangement of the co-operating elements. Fig. 2 is a transverse section on the line 2—2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a cross section on the line 3—3 of Fig. 1 looking to the right as indicated by the arrow.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The instrument comprises essentially two parts A and B, the part A being designated as a dilator because of its function and the part B referred to hereinafter as the body since it supports the adjunctive parts.

The dilator A is of less diameter and size than the body and is arranged at an obtuse angle to said body for convenience of use. The dilator comprises essentially two parts, light tube 1 and a reflecting tube 2, the latter being of larger diameter and provided at its outer end with a lens 3. The two tubes 1 and 2 are placed side by side and are enveloped by means of a sheath or casing 4, which closes the spaces formed between the two tubes and prevents any fouling of the instrument and enables the same to be readily and thoroughly cleansed. The

two tubes 1 and 2 are of substantially equal length so that their outer ends come about flush. A lens 5 is provided at the outer end of the light tube 1. A lens 6 is fitted to the outer end of the sheath or casing 4 and is jointed thereto so as to present a smooth joint which will prevent retention of any matter and avoid injury to tissues or membranes.

The body B comprises a telescope 7, a conductor tube 8 and a battery case 9. The parts 7, 8 and 9 are protected by means of a sheath or casing 10.

An illuminator 11 is located at the junction of the light tube 1 and the conductor tube 2 so as to shed rays of light through the light tube upon the part to be examined. A reflector 12 located in the rear of the illuminator 11 gathers and throws the rays of light through the tube 1. The illuminator 11 is preferably of the electric type and consists of an incandescent lamp receiving current from the battery located in the case 9 by means of electric conductors 13.

A circuit closure 14 is located near the inner end of the battery case and comprises a push button which may be pressed inward when it is desired to complete the circuit to throw light upon the part to be examined.

The telescope 7 comprises a series of slidable sections, the inner one being provided at its outer end with the usual eye-piece 15. A lens 16 is located at the inner end of the telescope and receives the object rays from a reflector 17 located at the inner end of the reflecting tube 2 and above the same. A cooperating reflector 18 is located below the object lens 16 in line with the reflecting tube 2 so as to receive the object rays and reflect the same to the part 17 and the latter in turn reflecting the same to the lens 16 and telescope to the eye-piece thereby admitting of proper inspection of the part to be examined as will be readily understood.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and

that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described this invention, what is claimed is—

1. A surgical instrument of the character described comprising a body portion, and a dilator at one end of the body arranged at an obtuse angle thereto, said dilator consisting of a light tube and a reflecting tube and said body comprising a telescope and a conductor tube, an illuminator located at the juncture of the light and conductor tubes, and complemental reflectors located at the juncture of the reflecting tube and telescope so as to reflect the object rays from the reflecting tube through the telescope.

2. In an instrument of the character described, comprising a body portion and a dilator arranged at an obtuse angle thereto, said dilator consisting of a juxtaposed light and reflecting tubes having lenses at their outer ends, a sheath inclosing the two tubes, and a lens at the outer end of the sheath and protecting the outer ends of the said tubes and the lenses thereof.

3. In an instrument of the character described, the combination of a dilator comprising juxtaposed light and reflecting tubes, an illuminator for shedding rays of light

through said light tube, complemental reflectors at the inner end of said reflecting tube, and a telescope having an oblong arrangement with reference to the dilator and adapted to receive the object rays from the reflectors at the inner end of said reflecting tube.

4. The herein described surgical instrument comprising a dilator and a body having a relatively obtuse angle arrangement, the dilator consisting of light and reflecting tubes provided at their outer ends with lenses, a sheath inclosing said tubes and provided at its outer end with a lens, said body comprising a telescope, a conductor tube and a battery case, the parts being inclosed by means of a sheath, an electric illuminator located at the inner end of said light tube, complemental reflectors at the inner end of said reflecting tube, the telescope having its inner end arranged to receive the object-rays from said reflectors, and means for closing the circuit through the electric illuminator.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN WILLIAM KOLB.

Witnesses:

JACOB BRUGGER,
T. A. COLEMAN.