

A. M. A. Laforge.

Surgical Instrument.

N<sup>o</sup> 87,946.

Patented Mar. 16, 1869.

Fig. 14.

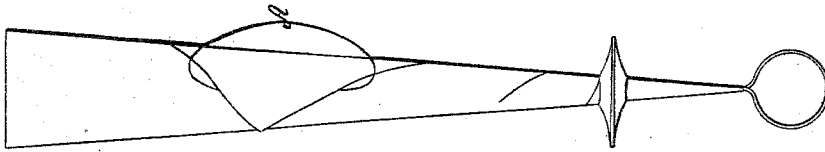


Fig. 13.

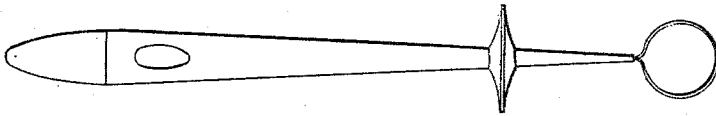


Fig. 12.

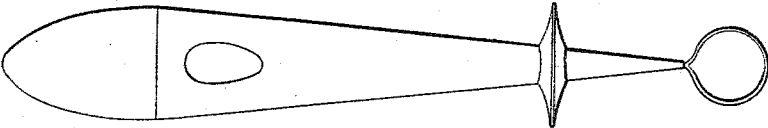


Fig. 10.

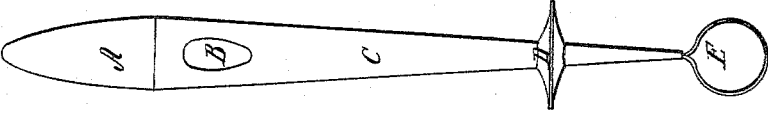


Fig. 9.

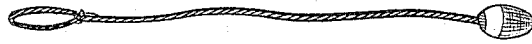


Fig. 8.



Fig. 5.

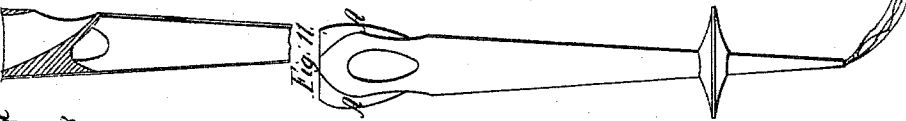


Fig. 4.

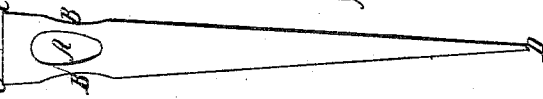


Fig. 3.

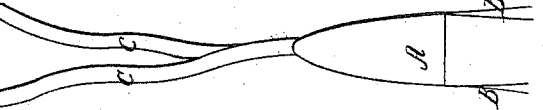


Fig. 1.

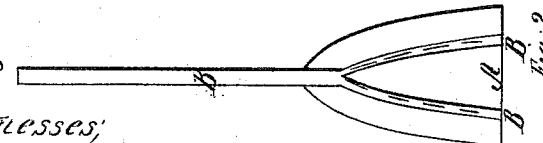


Fig. 6.

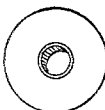
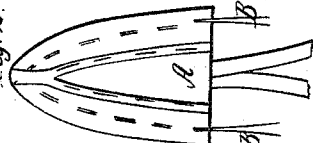


Fig. 7.



Fig. 2.



Witnesses;  
J. A. McKean  
J. H. W. H.

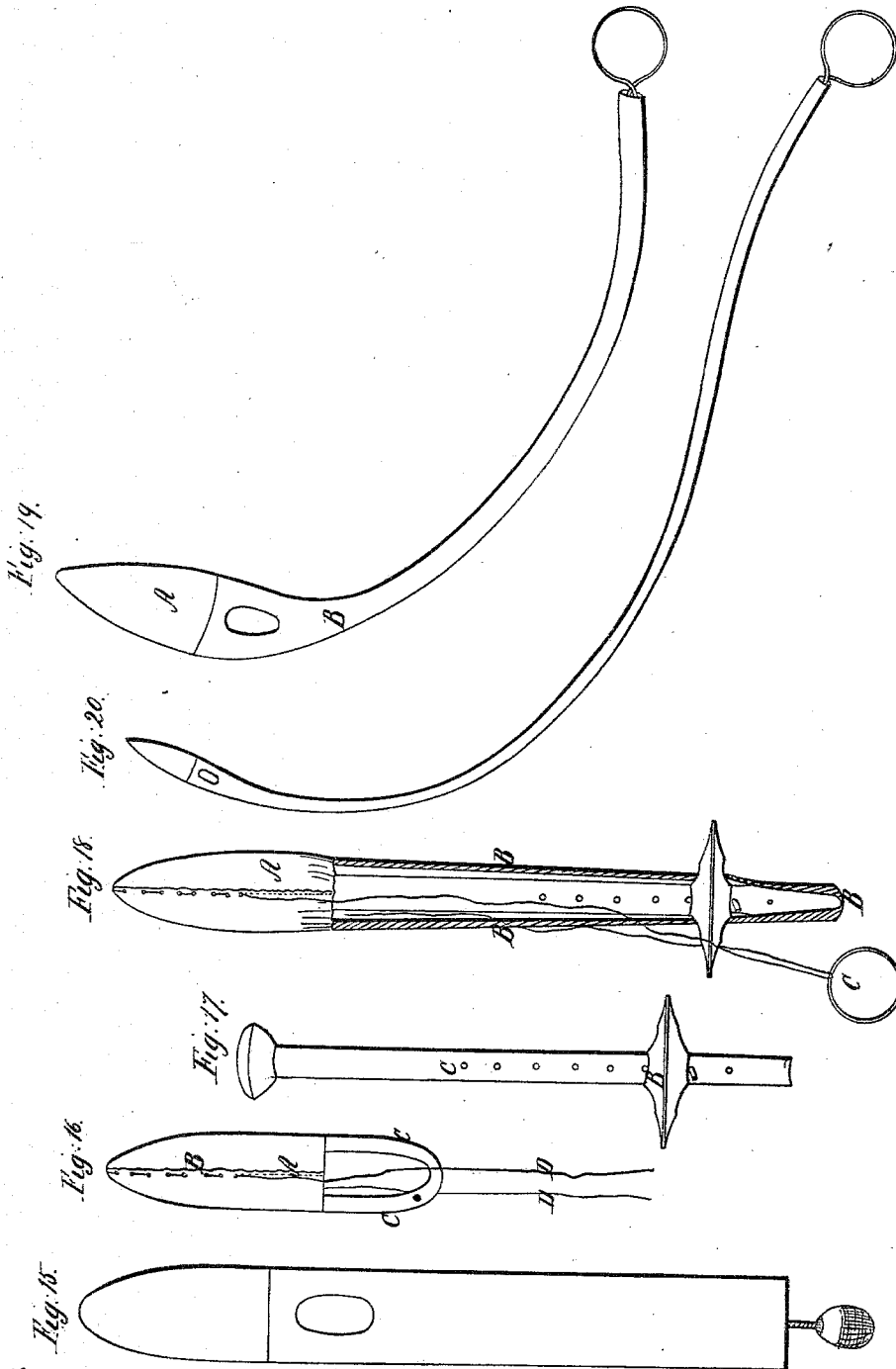
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Surgical Instrument.

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# United States Patent Office.

ADOLPHE MARIE ALBIN LAFORGUE, OF FRANCE.

Letters Patent No. 87,946, dated March 16, 1869.

## IMPROVED SURGICAL INSTRUMENT FOR CONVEYING MEDICATED POWDERS, AND DEPOSITING THEM ON INTERIOR CAVITIES.

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

### To all whom it may concern:

Be it known that I, ADOLPHE MARIE ALBIN LAFORGUE, surgeon-major of the first class, in the nineteenth of the line, in the military service of France, now in garrison at Caen, department of Calvados, have invented a new and useful instrument, which I call Pulviphore; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a new and convenient instrument for conducting powdered medicinal substances into, and depositing the same upon diseased interior cavities.

It is composed of a sack, or satchel, which may be of gold-beater's-skin, or of any light flexible skin, of India rubber, or of delicate fibrous material, to contain the medicinal powder, or substance to be used; of a suitable handle attached to the satchel, to carry the same, and of sewing-wires, (or threads,) and other accessory parts for properly constructing and operating the instrument.

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

Figure 1. A shows piece of skin, India rubber, or suitable cloth, cut to form one-half of satchel, or powder-holder, with band, or tape B, divided and sewn upon the said piece, for the purpose of reversing same when used.

Figure 2 shows the two parts of a satchel sewn together with metallic thread, or wire B, ready to be reversed, or upset.

Figure 3 shows the same reversed, with the ends of the tape or ribbons C C.

Figure 4, hollow handle, of cylindro-conical form; A being aperture for introducing the medicinal powder, or substance into the satchel; B B, lateral holes, through which pass the sewing and reversing-lines into the body of the handle.

Figure 5, section of handle to show the arrangement of diaphragm, which prevents the powdered, or other substance in the satchel from passing into the cavity of the handle.

Figure 6, front view of a disk, or collar, with hole for receiving the pointed end of the handle.

Figure 7, side view of the same.

Figure 8, a rod to be placed within the handle, having a small ring at top, for holding the sewing and reversing-lines, and a larger ring at the opposite end, for manipulating the instrument when it is to be used.

Figure 9, shows a string with knob at the end, which may be used as a substitute for the rod.

Figure 10, vaginal pulviphore complete. A, the

satchel; B, hole for inserting the powder; C, hollow handle, containing the operating-parts; D, collar; and E, ring at end of operating-rod.

Figure 11, pulviphore, after being discharged; A A, the two parts or sides of the satchel, being reversed and drawn into the lateral holes.

Figure 12, vaginal pulviphore of large size.

Figure 13, vaginal pulviphore of small size.

Figure 14, ordinary vaginal pulviphore, enclosed in suitable envelope for protection, before using; A being a thread for opening the envelope.

Figure 15, vaginal pulviphore with cylindrical handle.

Figure 16, satchel with its spring. A, permanent sewing. B, movable sewing. D D, sewing-wires or threads. C C, the spring.

Figure 17, solid handle with round head. A, round head. B, movable disk, or collar. C, holes for fastening the same.

Figure 18, pulviphore charged and ready for use.

Figure 19, pulviphore for the rectum; A being the satchel, and B, hollow flexible handle, of caoutchouc, or India rubber.

Figure 20, small pulviphore, which may be introduced into a deep and sinuous fistulous passage, the handle of same being likewise of India rubber, or suitable flexible material.

### Construction.

To construct my pulviphore, I take two pieces of light flexible skin, India rubber, or suitable fibrous material, the gold-beater's-skin being preferred, and cut into the shape shown in fig. 1, to form the satchel.

I then take two pieces of ribbon or tape, partially divide each of the same, and sew one upon each piece of skin or cloth, as shown in fig. 1.

I then turn the ends of the tape or ribbons over the points of the respective pieces, and unite the two parts by sewing the same together with two fine metallic threads or wires, the sewing commencing at the bottom, and the ends, or points of the wires passing to the point, or top of the satchel, where they remain embedded in the cloth, or substance, and under the bands.

I then reverse, or upset the sack, or satchel thus formed, and the ends of the tape or ribbons come upon the outside.

I then form the handle, or that part of the same which I call the diaphragm, shown in fig. 5. This may be composed of strong paper or pasteboard. I cut a piece of paper to such dimensions, that when rolled together it shall form the top of a conical handle of suitable size.

I then cut a hole in the same, suitable for inserting the powdered, or medicinal substance.

On the inner side of this hole, I so place, and fasten with glue, a piece of stiff paper, of such convex form,

that it shall partially surround the edges of the hole, and pass obliquely to the opposite side and top of the handle.

By this device, the substance introduced into the hole passes directly into the satchel, and is prevented from passing into the lower part of the handle.

In two other sides of this paper or pasteboard, forming the top of the handle, I then make holes, or openings, which are below the diaphragm already formed.

I then place the satchel, fig. 3, upon the top of the handle, fig. 5, in such manner that when the ends of the tape, or lines C C of fig. 3, are turned back, they will be on a line with, and readily pass into the holes B B of fig. 4.

I then fasten the bottom or edges of the satchel around the outer rim, or end of the handle, with glue, or any suitable sticking-substance, and bring the lower ends of the sewing-wires or threads, which are on opposite sides from the holes, around into the holes, and fasten them closely under the diaphragm, into the small ring of the rod, fig. 8. I also fasten the ends of the reversing-tapes or ribbons into this ring, but with sufficient slack, so that when the rod is drawn back, it will first act upon the wires, withdrawing them from the satchel into the body of the handle.

I then complete the body of the handle by cutting a piece of strong paper or pasteboard into such shape, that when rolled together, and attached with suitable paste, it will have the conical form shown in fig. 4.

I then cover the whole of the handle with silvered paper, or any suitable light material, leaving open only the hole A, fig. 4, for the introduction of the powder, or medicinal substance.

I then place the disk, or collar, (figs. 6 and 7,) upon the handle, as in fig. 10, and turn the end of the wire into the form of a ring, as shown at B, fig. 8, for conveniently manipulating the instrument.

Instead of the said rod, a cord may be used, such as is shown in fig. 9.

I then temporarily fill the satchel with shot, or some suitable substance, and immerse the same in a mixture of beeswax and oil, which makes it soft, and also gives it form after the material is removed.

The instrument being now ready, the satchel A, fig. 10, is filled, through the hole B, fig. 10, with the powdered substance which is desired to be used, and the hole is then stopped with a small quantity of cotton, or other fibrous material.

The instrument is then inserted into the vagina or rectum, until it reaches the diseased part, and is held with one hand at the disk, or collar D, fig. 10, while, with the other, the rod E, fig. 10, is withdrawn.

As the rod is withdrawn, the wires which have served for sewing the satchel, are drawn backward into the body of the handle, thus opening the satchel.

The rod then draws upon the reversing-lines, or bands, and the sides of the satchel are thus folded back until fully reversed, and drawn into the holes in the sides of the handles, when the instrument has the appearance shown in fig. 11.

In figs. 19 and 20, I show a modified form of the pulviphore for the rectum, or for reaching difficult and remote localities, the handle, or body of the same being composed of flexible India rubber.

In figs. 15, 16, 17, and 18, modified forms of construction are shown.

This instrument should not be confounded with insufflators, as its construction and manner of operation are entirely different; and besides the beneficial results obtained, it has this great advantage, that the person requiring its use, may in general personally apply and use it.

I have described what I consider the best form and manner of constructing my pulviphore, but it will be evident that there may be modifications of the form and method of constructing the same.

What I claim as new, and desire to secure by Letters Patent, is—

The new instrument, as a whole, constructed and operating substantially as shown and described, or its equivalent, for conveying powdered and other medicinal substances into and upon diseased interior cavities.

ADOLPHE MARIE ALBIN LAFORGUE.

Witnesses:

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