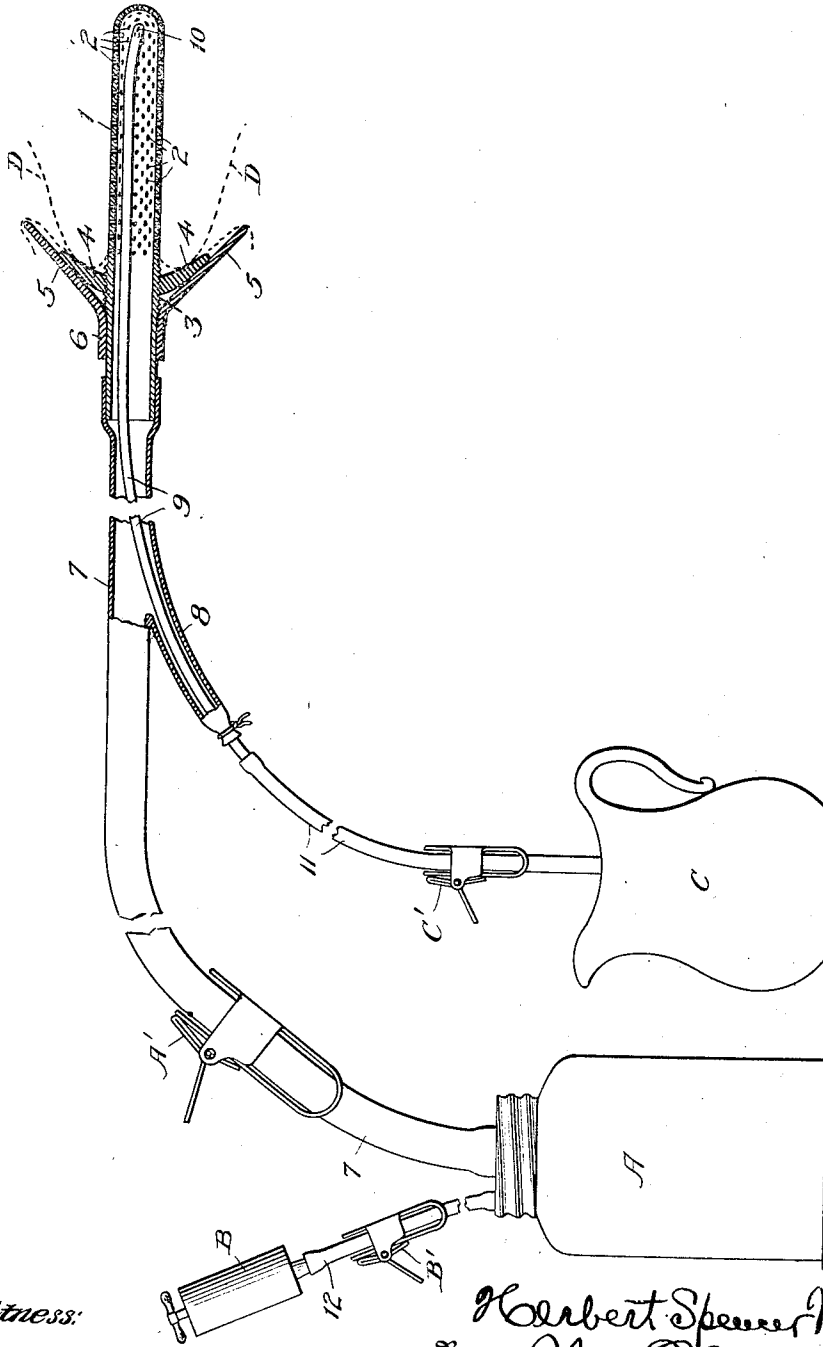


H. S. WHITE.  
 SURGICAL INSTRUMENT.  
 APPLICATION FILED JULY 13, 1915.

1,245,845.

Patented Nov. 6, 1917.



Witness:

Edwin L. Bradford

By

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 Attorney

Inventor

# UNITED STATES PATENT OFFICE.

HERBERT SPENCER WHITE, OF MCBAIN, MICHIGAN.

## SURGICAL INSTRUMENT.

1,245,845.

Specification of Letters Patent.

Patented Nov. 6, 1917.

Application filed July 13, 1915. Serial No. 39,625.

*To all whom it may concern:*

Be it known that I, HERBERT SPENCER WHITE, formerly a subject of the King of Great Britain, but who has filed his first papers for naturalization as a citizen of the United States, at present residing at McBain, in the county of Missaukee and State of Michigan, have invented certain new and useful Improvements in Surgical Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in instruments for use in the treatment of abnormal conditions existing in the numerous organisms of the human body, which are accompanied by indications of inflamed and otherwise cancerous symptoms.

An object of the present invention is to produce an instrument adapted to treat diseased organisms and remove broken down tissue and accumulated toxic substances by suction.

Another object is to provide, among other things, means for rarefying the air pressure within the instrument adjacent to the part under treatment, thereby allowing a natural expulsion of the poisons by reason of atmospheric pressure upon opposite sides of the diseased tissues. Additional means is also provided within the instrument, and consequently in the immediate locality of the extracted poisons, for automatically flushing the collected poisonous material or matter, the said flushing means operating and depending upon the unbalanced or rarefied conditions of air pressure above referred to, as will hereinafter more fully appear.

Another object of this invention is the production of an instrument comprising means for effectually contacting with parts surrounding the infected organisms, whereby the greatest possible vacuum or rarefied conditions of air pressure may be obtained.

With these and other objects in view the invention further consists in the novel arrangement and combination of the several parts hereinafter described.

In the accompanying drawing which forms part of this application for Letters Patent and exemplifies my invention, cor-

responding reference characters indicate like parts.

The figure is a side elevation partly broken away, and partly in section, showing the several elements of my improved apparatus combined and arranged for use in connection with a diseased organism diagrammatically illustrated by dotted lines.

Attention being directed to the drawings and reference characters thereon, it will be noted that the present invention is designed, arranged, and adapted for use generally wherever a leeching and flushing operation is required. As diagrammatically shown by the drawing, however, the apparatus is well suited and applicable to the treatment of infected, inflamed or cancerous conditions of the womb or uterus. Regardless of whether the diseased condition be of an acute or chronic nature, regular applications of this poison-extracting and subsequent flushing or washing instrument has been found to relieve and ultimately cure the infected parts. Likewise in all inflammatory conditions of the ova ducts or tubes, and in varying forms of vaginitis the artificial leeching or extracting treatment has proven successful.

Referring particularly to the drawing, A indicates an ordinary vacuum chamber, B an air pump communicating with said chamber for exhausting air therefrom, and C an open vessel for containing water, an antiseptic, or any suitable cleansing fluid, the said chamber, pump and vessel being of any approved size, form or materials. The numeral 1 indicates a hollow tubular leeching member or tip, made of hard rubber or other suitable material, and broken by a multiplicity of individual perforations 2 communicating with its hollow interior.

Adjacent to the perforations 2 the surface of leeching member 1 is configured by a screw thread 3, upon which, in threaded relation, is adjustably mounted a hard rubber spherical shaped member 4 of concave form, the latter being adapted to regulate the depth of penetration, and to protect the cervix uteri during treatment of an infected womb indicated at D by dotted lines.

Outside of the said disk 4, and inclosing the convex outer surface thereof, is a flexible funnel-shape packing gland 5 which is adapted to contact at its edges with the inte-

rior walls of the vagina, thus more effectually sealing the mouth of the womb, and is itself adjustably retained in place by the inherent contraction of its neck portion 6 surrounding the leeching member, as shown.

Suitably joined by an air-tight connection to the outer end of said leeching member or hollow tip 1, is a flexible tube 7 of any suitable dimensions, leading directly into the vacuum chamber A; and adjacent to its point of union with said leeching member this main tube 7 is provided with a lateral or Y branch 8, through which, and into the extreme end of the leeching member 1, extends a suitably curved flexible tube 9, perforated as at 10, at its inner end only, for the purpose of conducting a flushing fluid to the extreme end of the leeching member 1 when required.

As shown by the drawing the last mentioned flushing tube 9, by agency of a flexible tube 11, and suitable air tight connections, is arranged and adapted to terminate in the aforesaid vessel C; and, it will also be noted, that suitable valves are provided for independently controlling said tubes 7 and 11, as well as a short tubular connection 12 between chamber A and the exhaust pump B, in the present illustrations these valves being represented by a conventional form of clamp or clamps A', B' and C'.

It will also be apparent to persons skilled in the art to which this invention relates, that while I have illustrated and described this instrument primarily in connection with the organs and tissues aforesaid, its use is by no means restricted to these since it is equally applicable to all forms of surface or otherwise localized infections which can be equally well treated by the same instrumentalities, as for example, eruptions of the skin, diseased tonsils, etc.

As thus described this invention includes in combination a leeching member having a contacting surface suitably perforated as shown for the passage of poisons; a discharge or flushing nozzle arranged in close proximity to the leeching surface and preferably at a point best suited for successful removal of all collected poisons; an adjustable closure designed and arranged to exclude passage of air from the outside atmosphere to the parts under treatment, which might otherwise counteract the leeching operation; suitable means for producing a partial vacuum within said leeching member such means including a vacuum chamber and receptacle which serves to collect the exhausted material; and an additional container or open vessel for the flushing or disinfecting material communicating with the discharge or flushing nozzle arranged within the said leeching member all combined and arranged substantially as shown and described.

Having thus described my invention what I now claim and desire to secure by Letters Patent is:

1. An instrument of the class described including in combination a member having a hollow cylindrical contacting surface provided with a multiplicity of small openings, a spherical shaped member mounted on said hollow member near one end thereof having a concave inner surface and a convex outer surface, a cone-shaped packing gland carried by said hollow member and adapted to bear against and extend beyond the convex surface of the spherical member for excluding the entrance of air, a flushing nozzle arranged within the said hollow member adapted to discharge at one end thereof for flushing the latter, and means connected with said hollow member for exhausting the air therefrom whereby the materials collected in said hollow member can be carried off by flushing.

2. An instrument of the class described including in combination a member having a hollow cylindrical contacting surface provided with a multiplicity of small openings, a spherical shaped member adjustably mounted on said hollow member near one end thereof having a concave inner surface and a convex outer surface, said spherical shaped member being adapted to regulate the depth of penetration of the aforesaid hollow cylindrical contacting member, a cone-shaped packing gland slidably mounted on said hollow member adapted to engage the convex surface of the spherical member and extend beyond the circumferential edge thereof, a flushing nozzle located within the hollow member and arranged to discharge at one end thereof for flushing the latter, and means connected with said hollow member for exhausting the air therefrom whereby the materials collected in said member can be carried off by flushing.

3. An instrument of the class described including in combination a member having a hollow cylindrical contacting surface provided with a multiplicity of small openings, a member adjustably mounted on said hollow member near one end thereof having a concave inner surface, a packing gland slidably mounted on said hollow member adapted to engage the outer surface of the aforesaid member and extend beyond the outer circumferential edge thereof for excluding the entrance of air, a flushing nozzle arranged within the said hollow member adapted to discharge at one end thereof for flushing the latter, and means connected with said hollow member for exhausting the air therefrom whereby the materials collected in said hollow member can be carried off by flushing.

4. An instrument of the class described including in combination a member having a

hollow cylindrical contacting surface provided with a multiplicity of small openings, a spherical shaped member adjustably mounted on said hollow member near one  
5 end thereof having a concave inner surface and a convex outer surface, a packing gland slidably carried by said hollow member adapted to engage the convex surface of the said spherical shaped member and extend  
10 beyond the outer circumferential edge thereof for excluding the entrance of air, a valved controlled flushing nozzle located within the hollow member and arranged to

discharge at one end thereof for flushing the latter, and valved controlled means connected with said hollow member for exhausting the air therefrom whereby the materials collected in said member can be carried off by flushing. 15

In testimony whereof I affix my signature, 20  
in presence of two subscribing witnesses.

HERBERT SPENCER WHITE. [L. s.]

Witnesses:

WILLIAM H. GRAYES,  
WALTER H. LORD.