

Specification of Frederick Tolhausen : surgical injecting apparatus.

Contributors

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A.D. 1862, 12th JUNE. N° 1748.

SPECIFICATION

OF

FREDERICK TOLHAUSEN.

SURGICAL INJECTING APPARATUS.

LONDON:

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A.D. 1862, 12th JUNE. N° 1748.

Surgical Injecting Apparatus.

LETTERS PATENT to Frederick Tolhausen, Civil Engineer and Patent Agent, 17, Rue du Faubourg Montmartre, Paris, for the Invention of "A NEW OR IMPROVED SURGICAL INJECTING APPARATUS."—A communication from Claude André Jozansi, M.D., residing at St. Romain-de-Benet, Charente Inférieure.

Sealed the 2nd December 1862, and dated the 12th June 1862.

PROVISIONAL SPECIFICATION left by the said Frederick Tolhausen at the Office of the Commissioners of Patents, with his Petition, on the 12th June 1862.

I, FREDERICK TOLHAUSEN, Civil Engineer and Patent Agent, 17, Rue du
5 Faubourg Montmartre, Paris, do hereby declare the nature of the said
Invention for "A NEW OR IMPROVED SURGICAL INJECTING APPARATUS," a
communication from Claude Andre Jozansi, M.D., a person resident at
St. Romain-de-Benet, Charente Inferieure, to be as follows:—

This Invention relates to a new or improved apparatus for operating
10 injections or "irrigations" in the internal organs of the human body, such as
the vagina, the rectum, and the like. In this improved apparatus the
medicated solution is forced into the diseased organ by means of a suction
apparatus, consisting of a pipe furnished with two ball valves, opening both in
the direction of the mouth-piece or jet of the apparatus. Between those two
15 valves a sufficiently large ball of flexible material, such as india-rubber, is so
arranged that by alternate compression and expansion of the same, the
medicated solution is pumped into the diseased parts from a basin placed
underneath. A very powerful action is thus obtained on the generative and

Tolhausen's Improved Surgical Injecting Apparatus.

urinal organ, whose corrugations may be distended to any suitable degree. When this injecting apparatus is to be used for common lavements, i.e., as a syringe, the mouth or jet-piece need not differ from those now in use. But when used for injections into the vagina and uterus, the mouth-piece is made something like an hyperboloidal shape, the base of the hyperboloid being 5 elliptical in horizontal section, and concave in the vertical section, so as to fit the inguinal and other adjoining parts of the labiae vulvae, and make a tight joint with them, which is an essential feature of this Invention, to ensure the vacuum necessary for the working of the apparatus above mentioned. The hyperboloidal mouth-piece is made hollow, and provided with holes at 10 the summit, so that the spent liquid may be let out whenever required by means of a pipe and cock fitted on the base part of the mouth-piece without interfering with the liquid entering. I thus obtain a double current, one entering and the other issuing through the interior of the mouth-piece without wetting or otherwise interfering with the organ. Any suitable "canules" may 15 be adapted to the mouth-piece for lengthening it out, or suiting it to the size and shape of the organ.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Frederick Tolhausen in the Great Seal Patent Office on the 2nd December 1862. 20

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK TOLHAUSEN, Civil Engineer and Patent Agent, 17, Rue du Faubourg Montmartre, Paris, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent bearing date the Twelfth day of June, in the year of our Lord One 25 thousand eight hundred and sixty-two, in the twenty-fifth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Frederick Tolhausen, Her special licence, that I, the said Frederick Tolhausen, my executors, administrators, and assigns, or such others as I, the said Frederick Tolhausen, my executors, administrators, and assigns, 30 should at any time agree with, and no others, from time to time, and at all times thereafter, during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "A NEW OR IMPROVED SURGICAL INJECTING APPARATUS," a communication from 35 Claude Andre Jozansi, M.D., a person resident at St. Romain-de-Benet, Charente Inférieure, upon the condition (amongst others) that I, the said

Tolhausen's Improved Surgical Injecting Apparatus.

Frederick Tolhausen, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great
5 Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Frederick Tolhausen, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the
10 following statement:—

My improved injecting apparatus or "irrigator" is represented on the annexed Sheet of Drawings, and consists of the following parts:—

First, an elliptic plate D, E, made of metal, and of any suitable dimensions, measuring, say, 4 inches on the axis major, and $2\frac{1}{2}$ inches on the axis minor.
15 This plate has two hubs or projections on one side, the upper one K receives the tube A, B, C, the lower one L carries the end of the tap M, N. On the opposite face the plate carries a conical or conoidal pap F, G, about $2\frac{1}{2}$ inches long; this pap is fully united with the base plate, and is rounded off at the top, which is perforated with four (say) oval apertures. A pipe F, K, passes
20 through the pap, uniting its top end with the hub K, and in said pipe another tube F, H, is made to slide, which may be drawn in or out at pleasure, so as to allow changing the length. The end H of said pipe F, H, carries the usual "olive," which distributes the liquid through a central and lateral holes. The plate may also be made without the moveable tube F, H, and in that
25 case the end of the pap has to be perforated with a central and side holes, and for lengthening the same, gutta percha canulas of different dimensions are used.

Second, this apparatus consists also of a metallic tube A, P, B, C, about 8 inches long, bent at the upper part, and measuring about $1\frac{5}{8}$ inches in cir-
30 cumference, the bore being about $\frac{1}{4}$ inches. This tube has an enlarged diameter from A to B, containing a ball J of marble, or other suitable material, acting as a clack valve on its seat I, so as to prevent the liquid from returning into the tube B, C. A rib placed at P prevents the ball from closing the pipe upwards. At P the tube A, P, B, C, is screwed, in order
35 that it may be easily taken to pieces, and the ball J removed as may be required. The tube A, P, B, C, is provided near its end with a spur-like projection U, which is intended to act as a rest for the left-hand thumb of the patient.

Third, A¹, B¹, is a metallic tube slightly bent, and about four inches long,

Tolhausen's Improved Surgical Injecting Apparatus.

and $\frac{1}{4}$ inch bore. This tube is tapped at A¹, for receiving the metallic neck of the collapsible ball R; at B¹ there is a union for passing on the suction tube C¹, D¹. Near the upper end of said tube there is a branch for joining the lower end of the tube A, P, B, C. At its lower end this tube forms a valve box containing a spherical valve M¹, of marble, or any other suitable material, which allows the liquid to rise from the suction pipe C¹, D¹, into the tubes, but prevents the same from returning. The projections F¹, G, are intended to limit the rise of the valve M¹.

Fourth, R is a hollow india-rubber ball, measuring about 10 inches in circumference, which is fastened on the end A¹ of the tube A¹, B¹, in such manner as to form a tight joint, as shewn on the Drawing. A piston or other pumping apparatus may be used instead of the elastic collapsible ball, but I generally prefer the latter, being more easily worked, and less liable to get out of order.

Fifth, C¹, D¹, is a flexible or india-rubber suction pipe of suitable length and diameter, which at its upper end is passed on the union C¹, thereby communicating with the tube A¹, B¹. At its lower end the tube carries a glass or porcelain suction cup, which dips into the liquid.

Sixth, M, N, is a brass tap or cock, which fits into the tubular projection L on the plate D, E. An india-rubber pipe may be passed on the lower end of the tap, as the case may require.

Seventh, U¹ is a small metallic thimble for closing up the orifice B¹ of the tube A¹, B¹, as may be required in some cases.

Eighth, X, Z, is a canula of the ordinary shape for clysters, which, by means of its end Y may be fitted on the tube A, B, C, the injector G, D, E, having previously been removed.

All the metallic parts above described are made of some alloy not subject to rapid oxidation, such as Britannia metal.

The different part having been put together, as represented on the Drawing, the apparatus is used in the following manner, for vaginal injections:—The subject either cowers down, leaning her back against a support, or else seats herself on the edge of a low chair, in case the subject is in bed, she straddles her thighs, and a basin is placed under her seat, and another basin containing the injecting liquid is placed about 12 inches further in front. She then takes hold of the apparatus with her right hand, by placing the face of the thumb against the concave part of the spur U, and the other fingers of the same hand in the concave portion of the tube, and introduces the mouth-piece or pap F, G, into the vulvo-vaginal orifice, taking care to exactly press and adapt the plate D, E, against the labiae, and during this operation the end D¹

Tolhausen's Improved Surgical Injecting Apparatus.

of the pipe C¹, D¹, is not yet immersed in the liquid. The subject then grasps the ball R with the right hand, and causes it to collapse by pressing it, and lowers the end of the suction pipe into the injecting liquid. Thus by allowing the ball to expand, and compressing it again several times following, a
5 pumping action is obtained in the following manner:—By collapsing the ball R, the air it contained is driven out, and by expanding again the liquid contained in the basin, rushes in through the tubes C¹, D¹, and A¹, B¹, the mucous membrane of the vagina forming an air-tight joint with the orifices of the tubes H, F, K, A, B, C. The ball R is thus filled with liquid, and the
10 next following pressure drives this liquid into the tube A¹, B¹, the spherical valve closing the orifice E¹. The liquid thus rushes into the tube C, B, A, passes through the small tube K, F, H, and enters the vagina. By repeating the operation, the subject may force into the organ the quantity required for distending the mucose membrane, and taking out all the wrinkles or rugae;
15 when this result has been obtained, she opens the tap M, the liquid contained in the vagina is forced out by the elastic reaction of the organ, only a small portion returning through the holes of the olive or rose head into the tube A, B, C, where it is stopped by the valve J. The remaining and larger portion of the liquid passes through the oval holes of the conical mouth-piece
20 into the interior space of the same, and runs out through the tap M into a vessel provided for that purpose. The injecting operation thus described may be repeated several times in the same manner according to the requirements of the case; and after the necessary number of injections has been administered by the subject, she allows the whole of the liquid contained in the vagina to run
25 out, and withdraws the mouth-piece. The whole operation, although long to describe, scarcely takes one or several minutes time, and in practice it will be found immaterial whether the clearing tap is left open, and the suction pipe C¹, D¹, is immersed at once, as suction will nevertheless take place. When it is desired to dispense a clyster, the modus operandi is the same, the
30 canula being inserted into the rectum, and the suction pipe immersed in the liquid, and the tap kept shut.

In cases of severe disease, when the subject cannot be moved, the same apparatus is used to advantage. In those cases the ball J is taken out of the tube A, B, and the tap M having been shut previously, substitute for the
35 tube C¹, D¹, the thimble U¹, which fits on and closes the end B¹ of the tube A¹, B¹. The ball R having been collapsed, and the tube A, B, C, removed from the plate, the end A of the same is immersed in the liquid, and the ball being left to expand, fills with liquid. The tube A, B, C, is then fitted again on the plate D, E, the mouth-piece is introduced into the vagina, and pressure

Tolhausen's Improved Surgical Injecting Apparatus.

exerted on the ball R. Thus the vagina is filled with liquid, and the ball being allowed to expand again, the liquid returns through the tubes H, F, K, and A, B, C. This operation has to be repeated several times, the same liquid entering the vagina at each operation, it will be found necessary to charge the ball afresh from time to time, and for that purpose I use a ball of 5 larger diameter.

The following are the main advantages procured by the use of this improved irrigator or injecting apparatus. The subject can perform her own operations without any assistance, and without being forced to assume an awkward position; she may fill the vagina and leave the liquid therein as may be 10 required, so as to distend all the rugae, and remove the whole of the mucus, she may pass into the organ any quantity of liquid desired without leaving or changing her position; the air-tight joint formed by the plate D, E, prevents the external and surrounding parts of the organ getting wetted.

I would further observe that with this apparatus the patient may take either 15 local baths, by allowing the liquid to remain in the vagina, or injections and irrigations, or even douches, as the ball being powerfully compressed will throw the liquid to upwards of 12 feet distance. When it is desired to administer injections to a patient in bed without exposing her to moisture and disturbance, the suction pipe and the return or blow-off pipe both have to be 20 made sufficiently long to that effect, and a stronger suction ball is used. In case of much mucus being secreted, the tap M had better be removed to facilitate its passing out through the orifice L. The tube F, H, may be drawn in and out at will, so as to suit the length of the vagina, and reach the neck of the uterus. When it is desired to produce a single jet, the lateral 25 apertures of the rose head or olive are filled with wax, or a gutta percha canula may be mounted on the mouth-piece, having one central aperture. Different canulas have to be used to suit the various positions of the neck of the matrix.

The remaining Figure of the Drawings represents a canula that may be 30 adjusted on the large tube of the irrigator by means of the metal pipe *c*; *b*, flexible india-rubber tube; *a*, canula made of bone or other material.

CLAIMS.

First, the elliptical bent plate D, E, and pap or conoidal projection F, G, forming part thereof, or their equivalents constituting a mouth-piece, which, 35 when inserted into the organ will form an air-tight joint, for the purposes set forth, and substantially as described and represented on the annexed Drawings.

Second, the mode of making said conoidal mouth-piece D, E, F, G, hollow, and providing it with an outlet, as at L and M, for the purpose of drawing off

Tolhausen's Improved Surgical Injecting Apparatus.

the spent liquid, substantially as described and shewn on the Drawings annexed.

Third, the pumping apparatus, consisting of a collapsible and elastic ball R, in combination with the valves J and M¹ and suction pipe C¹, D¹, or their
5 equivalents, acting in the manner and for the purposes as described and shewn on the annexed Sheet of Drawings.

In witness whereof, I, the said Frederick Tolhausen, have hereunto set my hand and seal, this Twenty-first day of November, A.D. 1862.

F. TOLHAUSEN. (L.S.)

LONDON :

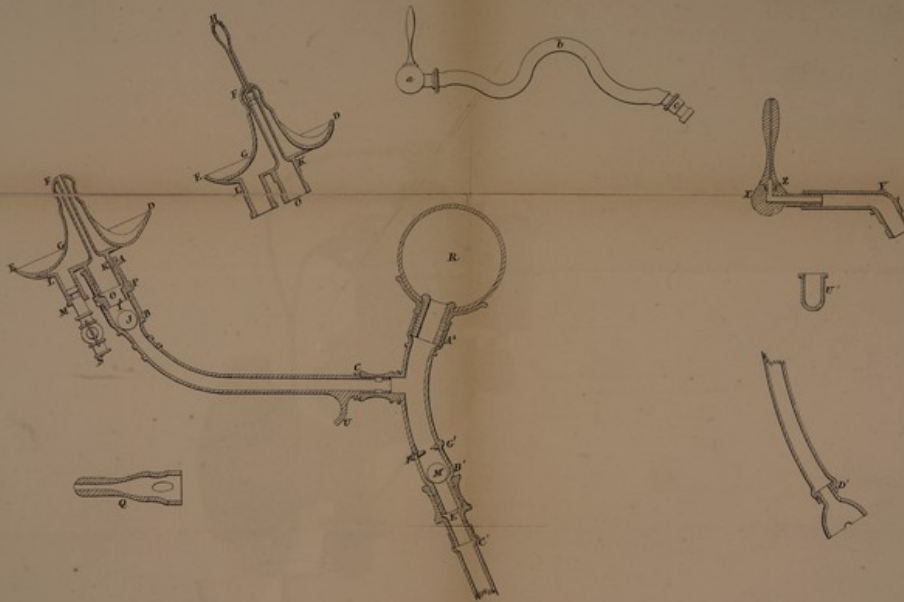
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1862.

In a letter which I, the said T. Tolhassen, have written to
my hand and seal, this Twenty-first day of November, A.D. 1887.

T. TOLHASSEN, (S.)

LONDON:

Printed by GEORGE FROWDE and JOHN BIRD, STATIONERS,
Printers to the Queen's most Excellent Majesty, 1887.



The filed drawing is not colored.

Drawn on Stone by Malby & Sons.

