

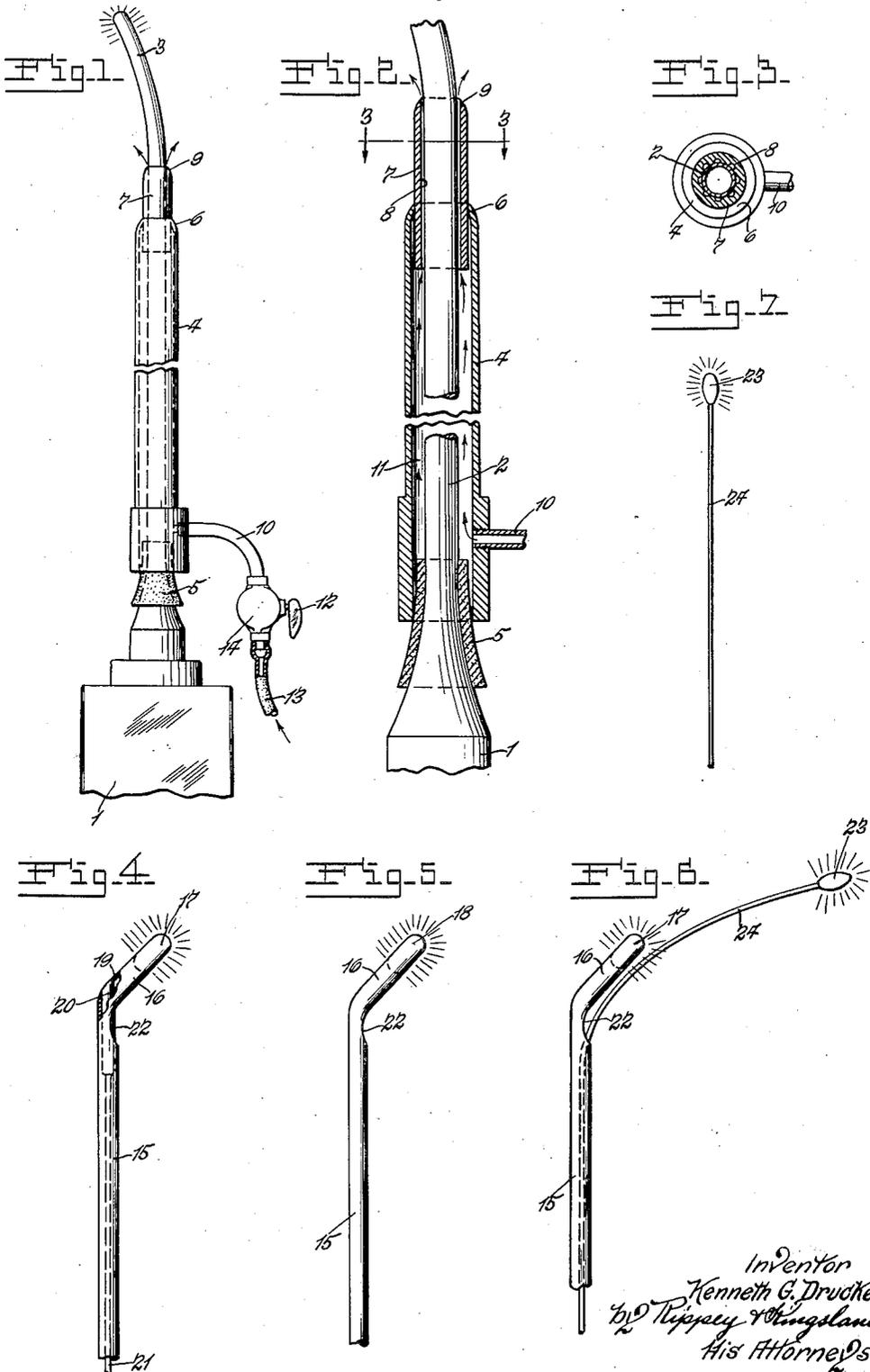
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K. G. DRUCKER

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DEVICE FOR THE TREATMENT OF CERTAIN AILMENTS

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Inventor
Kenneth G. Drucker
by Tappan & Kingsland
His Attorneys.

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DEVICE FOR THE TREATMENT OF CERTAIN AILMENTS

Kenneth G. Drucker, St. Louis, Mo.

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2 Claims. (Cl. 174—177)

This invention relates to a device for the treatment of certain ailments; and has special reference to the application of rays, other than radium, to the interior urinary tract.

5 The device comprises an instrument or device whereby rays, other than radium, may be applied into the inner urinary tract, intestinal tract, stomach and oesophagus for the treatment of ailments discovered by previous examination.

10 One form of the invention comprises a device for the generation and application of rays, other than radium, including a tubular instrument having a terminal portion from which the rays are radiated, and means mounted on said tubular portion for insertion into the urinary tract and comprising a passage through which air or other fluid may be conducted into the bladder to dilate the same, so that the device will function properly and the rays properly applied.

15 The invention also comprises means whereby rays, other than radium, may be applied to the interior urinary tract through an appropriate aperture formed in the device for that purpose.

20 Objects of the invention are to provide an instrument or device of the type and character indicated and capable of use to make effective application of the rays, other than radium, in a manner that should be apparent in the following description, reference being made to the accompanying drawing, in which—

25 Fig. 1 is a side elevation of one embodiment of my improved instrument.

30 Fig. 2 is an enlarged view with parts in section showing the passage through which air or other fluid may be conducted into the bladder to dilate the same in order to permit effective operation of the instrument.

35 Fig. 3 is a cross sectional view on the line 3—3 of Fig. 2 showing details of the invention.

40 Fig. 4 is a side elevation of a part of an instrument that may be used in the treatment of ailments of the bladder or of the interior urinary tract.

45 Fig. 5 is a similar view showing a part of the instrument in condition for use for treatment of the bladder or the interior urinary tract.

50 Fig. 6 is a view showing the instrument of Figs. 4 and 5 equipped with a device for insertion and extension into the ureter.

Fig. 7 is a view of the device for treatment of the ureter detached from the tube in connection with which it is shown in Fig. 6.

55 The invention as shown in Figs. 1, 2 and 3 is in connection with a standard applicator 1,

known as a cold quartz applicator. My improved instrument, which is in connection with this applicator, includes a glass tube 2 provided on its end with a part 3 for the radiation of rays, other than radium, and caused to function by electrical energy conducted thereto from an outside source through the applicator 1 and the tube 2 in a known manner.

60 A tube 4 is mounted on the tube 3 but does not extend to the ray device 3. The outer end of the tube 4 may enclose an elastic gasket 5 mounted on the tube 2 adjacent to the applicator 1 so as to obtain an hermetic joint and prevent damage to the tube 2 by any ordinary strains or stresses applied thereto by the end of the tube 4. The inner end of the tube 4 has an inwardly rounded perfectly smooth lip or flange 6 seating hermetically against a tube 7 mounted on the glass tube 2 and extending beyond the tube 4 but terminating short of the ray radiating device 3. A number of longitudinal grooves 8 are formed in the inner periphery of the tube 7 and these grooves 8 constitute passages whereby air or other fluid may be conducted from the tube 4. The inner end 9 of the tube 7 is rounded and is perfectly smooth, so that it is adapted to be inserted in the urinary tract.

65 A tube 10 opens into the space 11 between the tubes 2 and 4 and is equipped with a valve 12 whereby the passage of air or fluid into and through the space 11 and thence through the passages 8 may be controlled and regulated. A tube 13 connected to the valve housing 14 constitutes means for admitting or forcing air or other fluid through the valve 12 and thence into and through the space 11 and through the passages 8 into the bladder.

70 In use, the end 3 of the instrument and the tubes 7 and 4 are inserted into the urinary tract and may be inserted to an extent in which the parts 3 and 7 are within the bladder. The air or fluid may then be conducted into the bladder through the passages 11 and 8 in order to dilate the bladder. Electrical energy may be applied to the ray device 3 so as to subject the interior of the bladder to the action of these rays. Thus, it is clear that this instrument is capable of effective use for the satisfactory treatment of the ailments indicated.

75 The instrument shown in Figs. 4 to 7, inclusive, comprises a tube 15 provided on its inner end with an angular extension 16 with an illuminating lamp 17 on the end thereof, as shown in Figs. 4 and 6, or a ray radiating device 18 in connection with the end thereof, as shown in Fig. 5.

This tube 15 has at its inner end an opening 19 which is closed by an obturator comprising a body 20 and a stem 21. This obturator is insertable in and withdrawable from the tube 15 and is mounted therein only during the insertion of the tube through the urinary tract. After the tube is inserted, the obturator is withdrawn and electrical energy may be applied to the members 17 and 18. The member 17 illuminates the interior of the part into which it is inserted and the illuminated part may be visually observed through the tube 15. The tube is provided with an aperture 22 at or adjacent to the angle at the connection of the angular extension 16 with the tube. This aperture is on the inside of the angle and the ray radiating device for the ureter may be passed through the tube 15 and through the aperture 22 and extended into the ureter. The ray radiating device 23 is mounted on the end of a flexible connection 24 designed and adapted to be passed through the tube 15 and the aperture 22 and thence into the ureter while the interior of the bladder is illuminated by an illuminating member 17 on the end of the angular extension 16. Thus, the illuminating instrument facilitates inspection and observation of the inside of the bladder for location of ailments and also facilitates the insertion of the ray radiating device into the ureter.

It is now clear that this instrument connected with a source of electrical energy, such as a standard applicator as shown in Fig. 1, greatly facilitates the effective treatment of numerous ailments.

The construction and arrangement may be varied as widely as the scope of equivalent lim-

its will permit without departure from the nature and principle of the invention. I do not restrict myself in any unessential particulars, but what I claim and desire to secure by Letters Patent is:

1. An instrument of the character described comprising a tube adapted to be inserted in the urinary tract, a glass tube extending longitudinally through and projecting considerably beyond the end of said first named tube and being separated from the wall of said first named tube by an intervening space, a device holding said glass tube and the end of said first named tube in fixed relationship and forming a passage outside of said glass tube for the movement of fluid from said first tube through and beyond said device, and a part extending beyond the end of said glass tube and beyond said device for the radiation of rays other than radium.

2. An instrument of the character described comprising a tube adapted to be inserted into the urinary tract, a second tube extending longitudinally through and beyond said first named tube and separated therefrom by an intervening space and having an opening near its end beyond said first tube, an illuminating device in connection with said end of said second tube beyond and laterally from said opening, a rounded flange on the end of said first named tube that is toward said opening, and a device holding said second tube and said end of said first named tube in fixed relationship and having a rounded end spaced beyond said opening and from the end of said second tube and forming a passage for the flow of liquid from said first tube through and beyond said device.

KENNETH G. DRUCKER.

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