

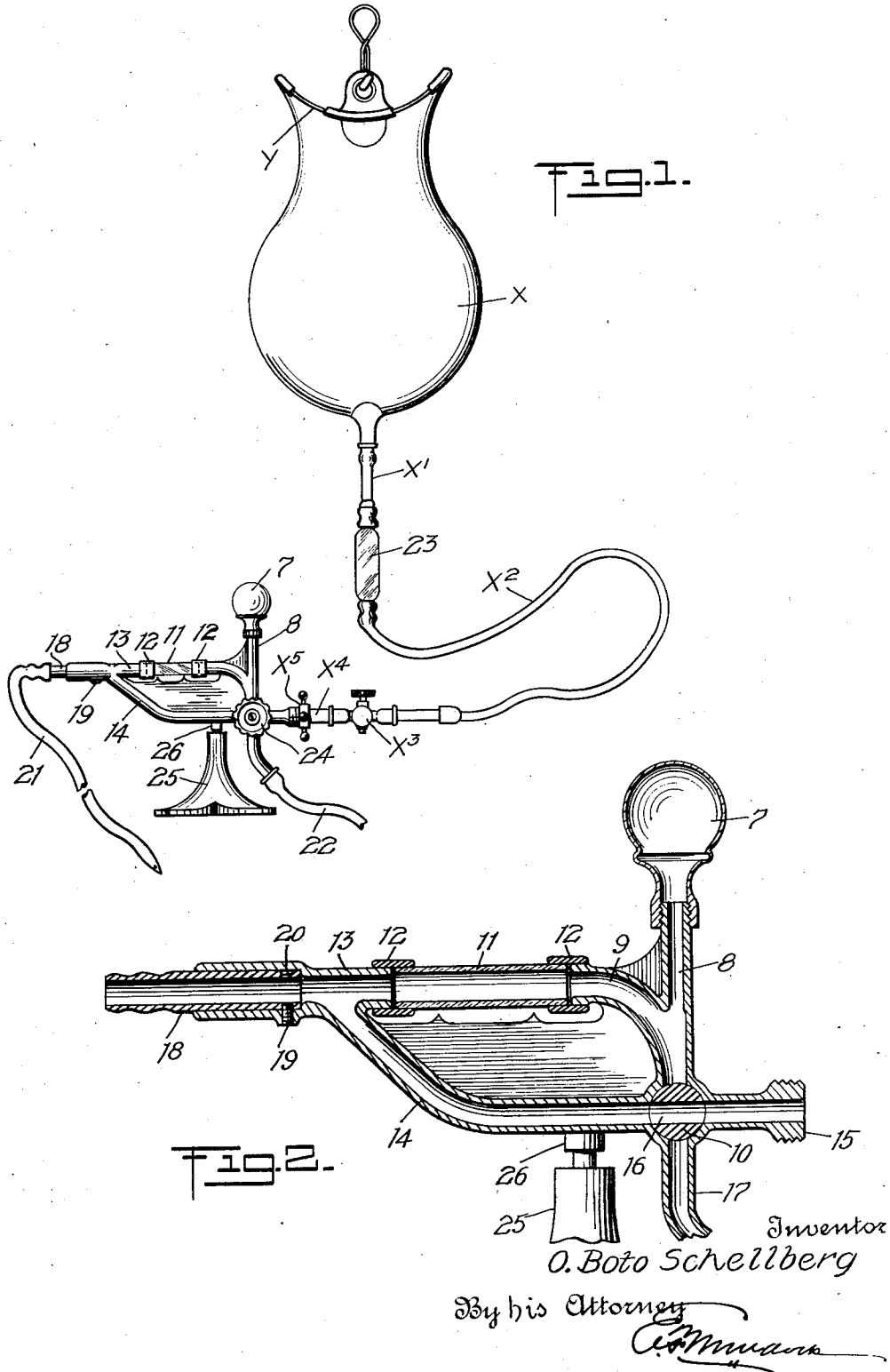
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COLONIC APPARATUS

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COLONIC APPARATUS

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6 Claims. (Cl. 128-227)

To cushion any impact occasioned by stoppage or retardation of the delivery to the colon; to facilitate the administration of colonic irrigation and treatment without set or permanent fixtures, to provide an apparatus of the character mentioned which may be packed within small compass to be transported by hand, and to accelerate the inauguration of a discharge for the relief of gas pressures.

Drawing

Figure 1 is a side elevation of an apparatus of the character mentioned, constructed and arranged in accordance with my invention.

Figure 2 is a detailed view on enlarged scale of the controlling valve and parts associated therewith employed in the present invention.

Description

In the practice of colonic therapy, or treatment wherein an elongated flexible delivery tube is inserted through the descending, transverse, and ascending colon for the purposes of irrigation of the said colons and implantation of medication, a disagreeable and painful operation has resulted caused by the presence of gas pockets in the intestines. Also distress has been occasioned by the formation within the intestines of packs which impede the said insertion of the tube. It is mainly to overcome the disagreeable effects above referred to and to relieve the distress of patients under treatment that I have provided a distributor valve structure wherein is a sealed air chamber 7.

The air chamber 7, preferably formed as a ball, as shown in the drawing, is operatively connected by means of a tubular extension 8 with the passage in the extension 9, which leads to the valve 10 as can be best seen in Fig. 2 of the drawing. The passage in the extension 9 is in open communication with the passage through a glass tube section 11. Whenever the tube section 11 is replaced, the resilient retaining heads 12 are drawn over the tube to free the ends of the extensions 9 and 13. The extension 13 is integral with the tubular passaged section 14 through which the treating liquids are delivered from the receptacle X.

The receptacle X is of any convenient shape. That preferred by me, however, employs a neck having a carrying and a spreading wire Y connected with the receptacle X, the delivery tubes X-1 and X-2, and the valve member X-3. The valve member X-3 has a connection extension X-4, the end of which is threaded to re-

ceive a retaining nut X-5. The retaining nut X-5 also engages the threaded section 15 on the passaged section 14.

By reference to Fig. 2 of the drawing, it will be seen that the lower end of the passage in the extension 9 and the end of the passage in the member 14 are controlled by a valve 10. The valve 10 is of the rotary type and has a single passage 16 adapted to register with the passage in the extension 9 and with the passage in a delivery pipe 17.

The structure embodying the tubular extension 8, the extension 9, extension 13, sections 14, 15 and delivery pipe 17, is a single casting. The sealed air chamber 7 is permanently attached to the tubular extension 8, though not of integral construction. The glass tube section 11 is removably connected with the structure being detached therefrom when desired by shifting the retaining bands 12.

The rotary connection 18 is removably attached to the body at the forward end thereof and is held in service by means of a set screw 19, the inner end of which registers with and enters the groove 20. These features are best seen in Figure 2 of the drawing. The purpose of the rotary 18 is to avoid any torsional strain on the colonic tube 21 which is attached to the rotary connection 18 during the operation of performing the treatment. A somewhat similar tube 22 is removably connected with the delivery pipe 17, the free end of said tube 22 being disposed in a sewer connection or other receptacle.

With an apparatus such as described, the operation is as follows: The patient has applied the tube 21, the receptacle X, having been preferably supported at the proper height above the patient, is filled with a liquid detergent or medication heated at the required degree, the valve X-3 being opened and the valve 10 turned so that the passage 16 registers with the passage in the section 14. The liquid is permitted to flow through the tube 21. The liquid also flows backward through the glass tube section 11, extension 9, and tubular extension 8, into the sealed air chamber 7. The trapped or contained air in the sealed air chamber 7 is thereby placed under pressure due to the height of the liquid in the receptacle X. When now an obstruction or gas pocket is encountered in the intestine and the flow through the tube 21 is retarded or arrested, which condition is indicated in the glass connection 23, the operator turns by means of the hand wheel 24, the valve 10, so that the passage 16 therein registers with the passage in the extension

9 and the delivery pipe 17. Due to the air pressure in the sealed air chamber 7, the column of liquid contained in the tubular extension 8 and the lower end of the extension 9, is accelerated in its movement through the delivery pipe 17 and the tube 22. A siphonic action is thereby quickly produced in the tube 21 and parts connected therewith withdrawing or delivering the liquid contents in the intestines and the gas which has been encountered. The movement of the flow is distinguishable in the glass tube section 11 which enables the operator to turn the valve 10 to a position where the liquid from the receptacle X is again introduced into the tube 21, the extension 9, the tubular extension 8, and into the sealed air chamber 7. By means of this apparatus, a quick relief is given in the treatment where dilation has started. It is the local dilation of the intestines due to obstruction or gas pocket that produces intestinal cramp or distress. This is quickly relieved or avoided by the operator who immediately observes the flow of liquid through the apparatus and the glass connection 23 thereof; then by manipulating the valve 10, relief is instantly given by suspension of the inflow and acceleration of the outflow.

To facilitate the handling of the apparatus and to increase the portability thereof, I provide a stand 25 socketed at the upper end to receive a pivot pintle 26 with which the apparatus is provided, the purpose of the construction being to enable the operator to turn the apparatus to more easily accommodate the patient.

I claim:

1. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a discharge passage, said passages being angularly disposed, a manually operated valve adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber, whereby, when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve.

2. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a discharge passage in open communication at their forward ends, said discharge passage having a transparent section for viewing the flow there-through, said passages being angularly disposed, a manually operated valve rotatively mounted in said distributor and adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber whereby when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve.

3. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a dis-

charge passage, said passages being angularly disposed, a manually operated valve adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber, whereby when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve, and a transparent tube section adapted to be incorporated with said discharge passage for inspecting the materials flowing through said discharge passage.

4. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a discharge passage, said passages being angularly disposed, a manually operated valve adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber, whereby when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve, a transparent tube section adapted to be incorporated with said discharge passage for inspecting the materials flowing through said discharge passage, and elastic connecting bands for closing the junction between said transparent section and the adjacent portions of said discharge tube.

5. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a discharge passage, said passages being angularly disposed, a manually operated valve adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber, whereby when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve, and a portable support for said distributor, said support being separable from said distributor.

6. An apparatus as characterized comprising a receptacle for fluid adapted for elevated suspension, a distributor operatively connected therewith embodying a delivery passage and a discharge passage, said passages being angularly disposed, a manually operated valve adapted for registration with said passages successively, an air chamber connected with said delivery passage and adapted to receive said fluid therefrom to compress atmospheric air in said chamber whereby when said valve is manipulated to register with said delivery passage, the pressure in said chamber will accelerate the movement of said fluid through and below said valve, a portable support for said distributor, said support being separable from said distributor, and means for rotatively uniting said distributor and support.

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