

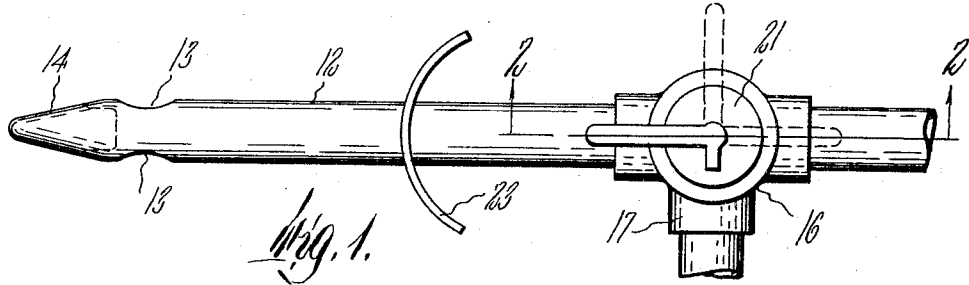
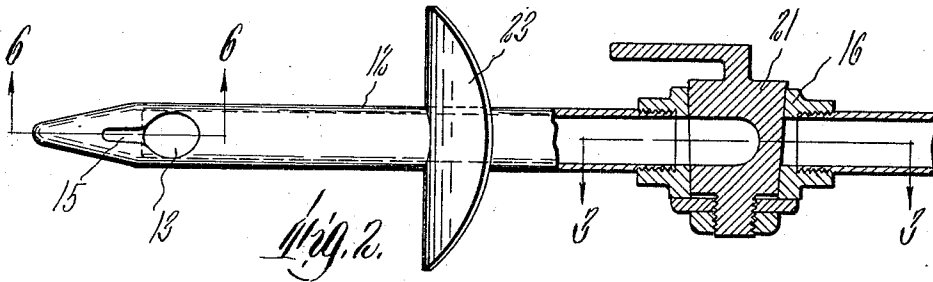
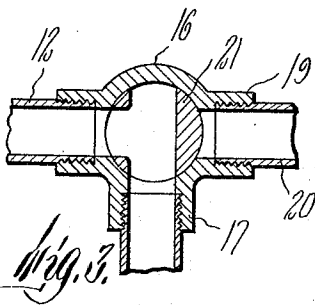
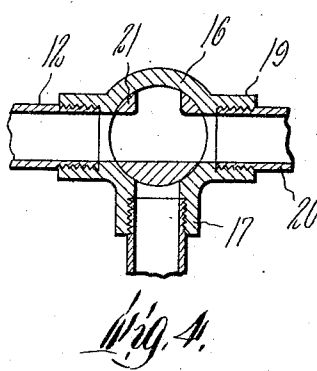
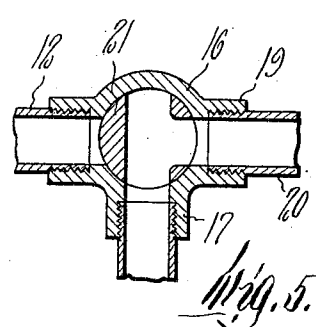
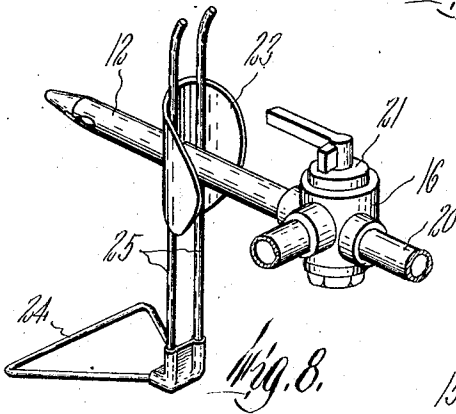
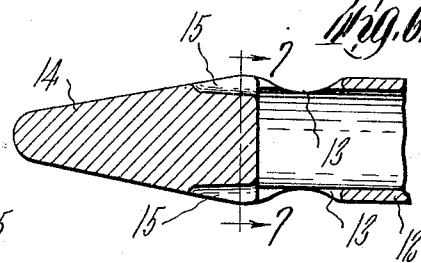
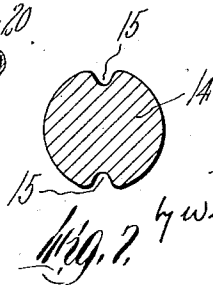
April 12, 1932.

DE FOREST B. CATLIN

1,853,202

INTERNAL IRRIGATOR

Filed Nov. 25, 1930



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UNITED STATES PATENT OFFICE

DE FOREST B. CATLIN, OF BOSTON, MASSACHUSETTS

INTERNAL IRRIGATOR

Application filed November 25, 1930. Serial No. 498,086.

The object of this invention is to provide an improved irrigator adapted particularly to force cleansing or irrigating liquid under pressure into the colon and permit the discharge of the liquid and waste matter loosened and carried thereby.

The invention is embodied in the improvements hereinafter described and claimed.

Of the accompanying drawings forming a part of this specification,—

Figure 1 is a plan view of an irrigator embodying the invention.

Figure 2 is in part a side view of the same, and in part a section on line 2—2, of Figure 1.

Figure 3 is a fragmentary sectional view taken on line 3—3 of Figure 2, and showing the irrigating adjustment of the three way valve hereinafter described.

Figures 4 and 5 are views similar to Figure 3, showing different valve adjustments.

Figure 6 is an enlarged section on the plane indicated by line 6—6 of Figure 2.

Figure 7 is a section on line 7—7 of Figure 6.

Figure 8 is a perspective view showing the irrigator and means for supporting it against pressure tending to displace it from its operative position.

The same reference characters indicate the same parts in all of the figures.

In the drawings 12 designates an elongated applicator which is a cylindrical tube of metal or other hard and rigid material adapted to be sterilized formed for insertion in the anus and provided at its forward end with inlet and outlet means permitting an outward flow of irrigating liquid, and a return flow of waste, which includes said liquid and matter dislodged and carried thereby, said means being preferably embodied in a plurality of ports 13, in the tube wall. Said ports are preferably located behind a solid forward nose 14 of tapering form and having a blunt apex, said nose being adapted to gently displace tissues encountered by the applicator during its insertion. The nose 14 is preferably provided with longitudinal channels 15 communicating with the ports 13 and adapted to minimize the checking of a

return flow of waste by body tissues contacting with the applicator.

The irrigator is provided at the rear end of the applicator with means for conducting irrigating liquid to the bore of the applicator, and waste from said bore, said means being embodied in a three-way valve including a casing 16 fixed to the rear end of the applicator and communicating with the bore thereof, said casing having an inlet for irrigating liquid, including a casing branch 17 and a conduit 18, and an outlet for waste, including a casing branch 19 and a conduit 20. The valve includes a plug shaped three-way valve member 21, movable in the casing and having bores or passages arranged as shown by Figures 3, 4 and 5 so that the member may be adjusted to first connect the casing inlet with the applicator bore as shown by Figure 3, and cause irrigation, then connect said bore with the outlet as shown by Figure 4 and cause discharge of waste, and finally connect the inlet with the outlet as shown by Figure 5, and cause the flushing of the outlet.

23 designates a shield fixed to and surrounding the applicator and spaced from its forward end. Said shield is a curved plate having a salient side facing the outer end of the applicator and formed to closely fit a recessed body portion immediately surrounding the anus in which the applicator is inserted, and oppose leakage of waste around the portion of the applicator which projects from the body. This shield constitutes an abutment for the supporting bracket next described.

To oppose outward displacement of the applicator from its operative position by pressure within the body tending to force it rearward, I provide supporting means embodied in a bracket composed of a base 24 formed to be horizontally confined by a mattress or other support on which a patient lies while undergoing colonic irrigation, and a standard perpendicular to the base and composed of two upright members 25 fixed to the base and adapted to bear loosely on the rear or outer side of the shield at opposite sides of the applicator as shown by Figure 8, there being no positive connection between the

standard members and the shield. The bracket prevents endwise and sidewise displacement of the applicator.

In cleansing the colon by colonic irrigation, it is advisable to make the operation as comfortable to the patient as possible without deteriorating from the efficiency of the treatment. The quicker a reasonable quantity of irrigating liquid is injected and the waste discharged, the more valuable is the technic, because, if the operation is protracted and tiresome, the patient is liable to refuse to take a suitable number of successive irrigations.

To ensure suitably rapid treatment, the external diameter of the applicator is preferably five eighths of an inch. The metal wall of the applicator is so thin that the applicator bore has a diameter of approximately half an inch.

The ports 13 are so proportioned that their aggregate conducting capacity is not less than that of the applicator bore, so that liability of obstruction by waste matter, and the necessity of removing the applicator for cleaning during the operation are reduced to a minimum.

The several ports and passages of the three-way valve have substantially the same diameter as the applicator bore, as indicated by Figures 2, 3, 4 and 5. It will be seen therefore that provision is made for making colonic irrigation reasonably comfortable and rapid. The shield 23 is so spaced from the end portion 14 that said portion clears the internal sphincter muscles when the shield contacts with external body surfaces, so that the applicator is enabled to easily convey irrigating liquid to the sigmoid portion of the colon without being projected into the colon. From this position the liquid may be massaged by any suitable means to all parts of the large bowel, known as the colon.

I have found by practical use of the described irrigator that the applicator is adapted to force the irrigating liquid into the colonic cavity without objectionable irritation, the only sensation that the patient has being that of fullness, this being due to the rapid injection permitted by the specified diameter of the applicator bore, the ports 13, and the other conducting passages.

I have also found that the immediate relief of internal pressure due to the ability to discharge the waste rapidly, is an important advantage.

The adaptation of the irrigator to rapidly irrigate and rapidly discharge the proceeds of the irrigation render the irrigator useful for vaginal douching. The comfortable and quick distension of the vaginal vault by the irrigating liquid has the advantage of irrigating all parts of the mucous membrane of said vault, and the quick return flow carries away the matter removed by irrigation.

It will be seen that an important element of the irrigator is an abutment fixed to the external surface of the applicator between its inner and outer ends and arranged to bear on the standard 25 of the bracket to prevent outward endwise movement of the applicator from a predetermined position. A suitable abutment is provided in this instance, by the shield 23 which has a dual function in that it opposes escape of liquid and waste from the anus. The abutment may, however, be adapted only to cooperate with the bracket in opposing outward endwise movement of the applicator.

I claim:

1. A colonic irrigator consisting of a tubular applicator of rigid sterilizable material insertable in the anus and rectum, and provided at its forward end with outlet and inlet means permitting an irrigating discharge and a return of waste, a three way valve including a casing fixed to the rear end of the applicator and having an inlet for irrigating liquid and an outlet for waste, and a valve member having conducting bores and adjustable in the casing to connect the applicator bore first with the casing inlet for irrigation, then with the casing outlet, for waste discharge, and finally to connect said inlet with the outlet for flushing, and a shield fixed to the applicator between its ends and formed to closely fit the recessed portion of the body which immediately surrounds the anus, and oppose escape of liquid and waste from the latter, said shield being spaced from the forward end of the applicator to prevent the inward movement of said end beyond the rectum, the said elements constituting a rigid structure adapted to be handled as a unit and having a limited inward and outward projection from the anus, so that the applicator is prevented from entering the colon, and the valve being located in suitable proximity to the anus to permit prompt and positive control of the valve by the operator.

2. A colonic irrigator as specified by claim 1, comprising also a bracket formed independently of the irrigator and including a base formed to be horizontally confined under the body of a patient, and a standard perpendicular to the base and formed to bear on said shield and thereby prevent outward endwise movement of the applicator from its predetermined position.

3. A colonic irrigator as specified by claim 1, comprising also a bracket formed independently of the irrigator and including a base formed to be horizontally confined under the body of a patient, and a standard perpendicular to the base and composed of two spaced apart members arranged to bear on said shield at opposite sides of the applicator and prevent both outward endwise movement and sidewise movement of the applicator from its predetermined position.

4. A colonic irrigator comprising a tubular applicator of rigid sterilizable material insertable in the anus and rectum, and provided at its forward end with outlet and inlet means permitting an irrigating discharge and a return of waste, a three way valve including a casing fixed to the rear end of the applicator and having an inlet for irrigating liquid and an outlet for waste, and a valve member having conducting bores and adjustable in the casing to connect the applicator bore first with the casing inlet for irrigation, then with the casing outlet for waste discharge, and finally to connect said inlet with the outlet for flushing, the applicator being provided with an abutment fixed to its external surface between its inner and outer ends, the said elements constituting a rigid structure adapted to be handled as a unit, a bracket formed independently of the irrigator and including a base formed to be horizontally confined under the body of a patient, and a standard perpendicular to the base and formed to bear on said abutment to prevent outward endwise movement of the applicator from a predetermined position.

In testimony whereof I have affixed my signature.

DE FOREST B. CATLIN.