Oct. 5, 1943. H. O. PRITCHARD 2,331,226

SURGICAL IRRIGATING EQUIPMENT

Filed Nov. 22, 1941

Fig. 1.

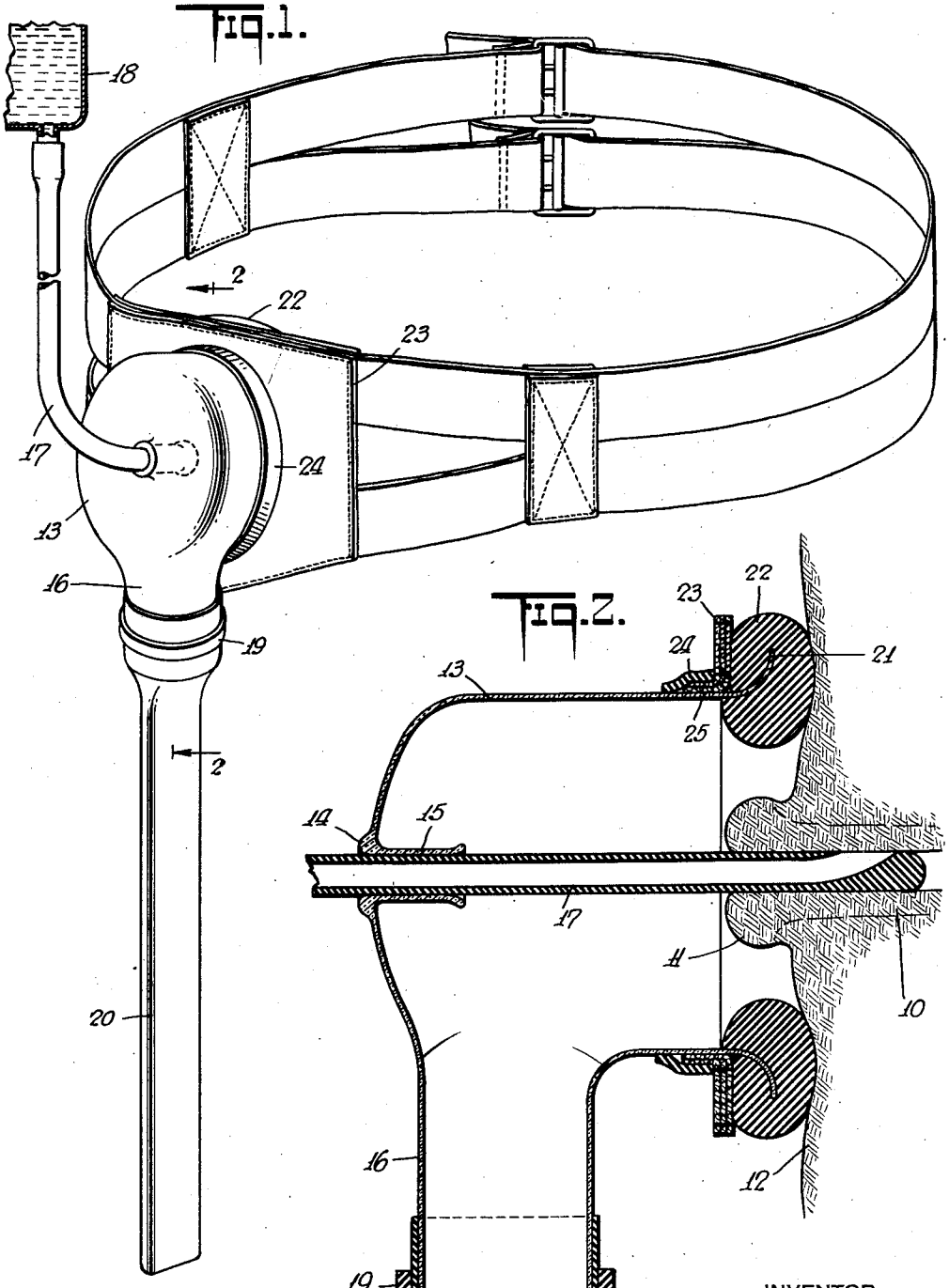


Fig. 2.

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41-140

Patented Oct. 5, 1943

2,331,226

UNITED STATES PATENT OFFICE

2,331,226

SURGICAL IRRIGATING EQUIPMENT

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Application November 22, 1941, Serial No. 420,038

2 Claims. (Cl. 128—283)

The present invention relates to equipment for irrigating passageways, cavities or surfaces of the human anatomy and especially such as are accessible from the exterior as the result of surgery or of injury.

A general object of the invention is to provide equipment for the foregoing purpose, which in operation shall maintain in dry and clean condition the exposed areas about the parts to be irrigated and shall thereby eliminate discomfort and inconvenience to the bedridden patient, and which may be conveniently used by the ambulatory patient with like advantages and without the aid of an operator.

While the invention is applicable for other purposes, it has special utility in the irrigation of a colostomy. The irrigation of a colostomy especially where the patient is still bedridden, has heretofore been a source of discomfort and torture to the patient and has been an assignment which nurses usually take on with reluctance because of its general arduousness and messiness.

It is an object of the present invention to afford equipment by which a colostomy may be readily irrigated without soiling the bed or clothing and with relative comfort to both patient and operator, which equipment shall be devoid of valves, springs or adjustable elements and involves but few parts, that are simple and easy to handle, which equipment, when installed, exposes to view the aperture in the body through which the irrigating fluid is to be introduced and also the efflux as it leaves the body, which equipment admits of convenient manipulation of the catheter tube that is also exposed to view, so that ready control of the entire irrigating operation may be had, without either deficiency or excess of irrigation, since from visual inspection of the efflux as it leaves the body aperture the completion of the irrigation may be readily seen, and all this without even momentary exposure of the colostomy to leak or drain upon the bed, chair or floor.

In the accompanying drawing in which is shown one of various possible embodiments of the several features of the invention,

Fig. 1 is a perspective view with parts broken away showing the equipment substantially in its entirety, and

Fig. 2 is a sectional view on a larger scale taken on the line 2—2 of Fig. 1, also showing in a roughly diagrammatic way the application of the device to a colostomy.

In Fig. 2 of the drawing, the colostomy is shown in a roughly diagrammatic way, the transverse branch of the colon 10 being shown with its reversely turned extremity 11 affixed to the wall 12 of the abdomen from which it protrudes.

The irrigation unit comprises a tranparent dome 13, desirably of glass, generally circular in cross-section, with a small inlet aperture 14 in its top, at the outer end of a guide tube or sleeve 15 directed inwardly and desirably axially of the dome.

The dome also has a large outwardly directed nipple 16 serving for outlet or efflux of the drainage and desirably extending radially downward, when applied to the body.

The catheter tube 17, preferably of rubber, is supplied from a tank 18 from which the desired irrigating solution is to flow by gravity. To the outlet end of the discharge branch 16 there is connected as by a rubber band 19 a flexible hose 20 to discharge into a slop bucket (not shown).

In a desirable embodiment, the outwardly turned rim 21 of the dome is embraced by an annular gasket 22, desirably of soft rubber, and said rim extends through a corresponding aperture in a belt 23, which is pressed against the forward face of the gasket. The dome may be secured to the belt by means of a wide rubber band 24, one edge of which encircles the inwardly extending rim 25 of the belt aperture and the other rim embraces the transparent dome.

The advantages of the device will be appreciated from the following description of its use. The belt 23 is applied to the body with the gasket 22 of the dome pressed against the abdomen and encircling the colostomy outlet 11. Manifestly the device could be held against the body by means other than a belt, or even by hand. The control of the irrigation is effected by manipulation of the catheter tube, as will be now set forth without the need for even momentarily raising the device from the body.

The catheter 17 which is first coated with petroleum jelly, is introduced through the inlet aperture 14, it is directed by guide sleeve 15 and by reason of the transparency of the dome, may be readily brought into central engagement with the colostomy. By slight stimulation from the end of the catheter, the colostomy will be caused to open sufficiently to permit the catheter tube to enter and thereupon to be fed inward six inches, a foot or more, depending upon the character of treatment required. When the irrigating liquid is now turned on, overflow will occur after the colostomy has been sufficiently filled, the discharge passing out around the catheter tube 17 and draining through the discharge nipple 16

to the slop bucket. The petroleum jelly about the catheter prevents leakage of efflux through aperture 14. If desired, the catheter tube may be manipulated during irrigation to move it inward and outward for selective local irrigation and promotion of peristalsis.

In case it is desired to relieve discomfort or strain upon the patient as the treatment proceeds, or to permit discharge of solid matter that would be impeded by the catheter tube, the latter may readily be withdrawn, without the necessity for removing the transparent dome; so that in such process of withdrawal the likelihood or possibility of soiling is obviated. The catheter tube may be thereupon reinserted and it may be manipulated as above set forth, while keeping the patient and the bed clothing clean, dry and comfortable.

In some cases, upon removal of the catheter tube, a forceful ejection of the colon contents may ensue. It is, therefore, sometimes desirable while removing the catheter tube, to displace the dome slightly laterally along the body without raising it from the body, so that the discharge stream will not register with the catheter guide tube 15, but will impinge against the solid portion of the dome wall laterally of the catheter opening. It is obvious of course that the inlet aperture could be disposed laterally of the axis of the dome, if desired.

The apparatus described, renders possible the complete visual control of each stage of the operation. Judging by the progress of the mucous discharge and the reaction of the organ, the operator or patient after he has had some experience, may determine exactly when the irrigation has been completed, and, as noted, without the need for removing the dome and without risk of soiling and discomfort.

While, as noted, the invention has an important application to the irrigation of a colostomy, it is also applicable in other relations, as for instance, in the treatment of major wounds. Where the familiar wet dressing is used for the purpose, not only is it difficult to control the temperature at which the affected area is preferably to be maintained, but dead tissue remains in place until it is removed by the physician in changing the bandage.

The present invention renders possible the treatment of serious wounds, by the application of a continuous flow of Carrel-Dakin or like solution over the affected area at desired controlled temperature. Moreover, the dead tissue is readily sloughed off in the constantly flowing solution. Of course, for the latter application, the dome would have a rim appropriately shaped to fit the portion of the body to be treated.

As many changes could be made in the above apparatus, and many apparently widely different embodiments of this invention, could be made without departing from the scope thereof, it is intended that all matter contained in the above description, shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. An irrigating device comprising a glass dome, having an outwardly flaring rim structure adapted snugly to engage the body, a small catheter aperture in the wall of said dome, presenting a unitary guide sleeve for such catheter, said dome having a unitary, generally radial nipple for mounting an effluent hose.

2. An irrigating device more especially for treating a colostomy, comprising a belt, a glass dome having a rim extending through a corresponding circular aperture in said belt and having a resilient gasket about said rim on the rear face of said belt, said dome having a unitary downwardly extending discharge branch for mounting an effluent hose, said dome having a unitary inwardly extending tubular guide for a catheter tube to be inserted therethrough into the colostomy.

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