

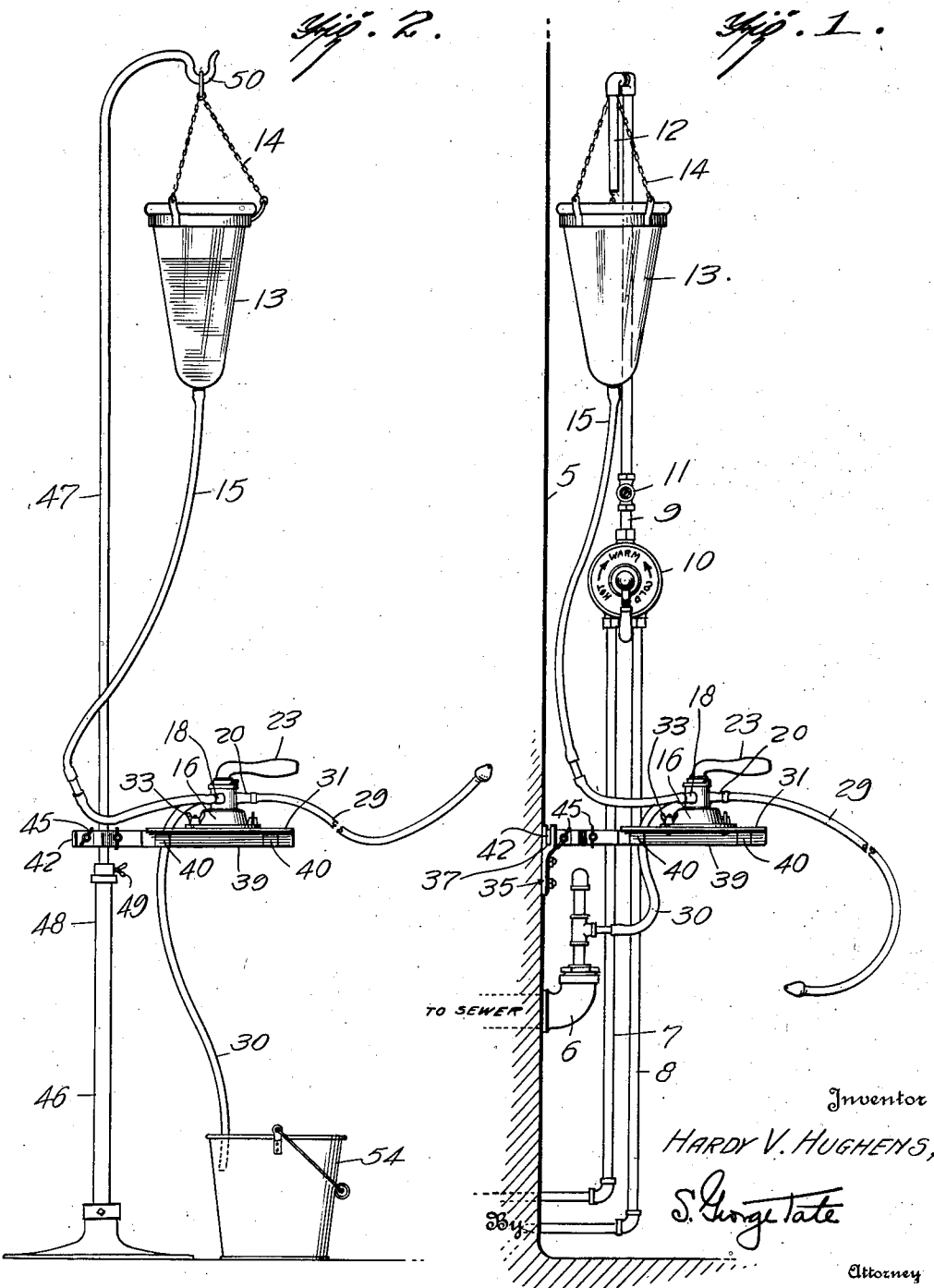
April 6, 1926.

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H. V. HUGHENS
COLONIC IRRIGATING APPARATUS

Filed Sept. 4, 1924

3 Sheets-Sheet 1



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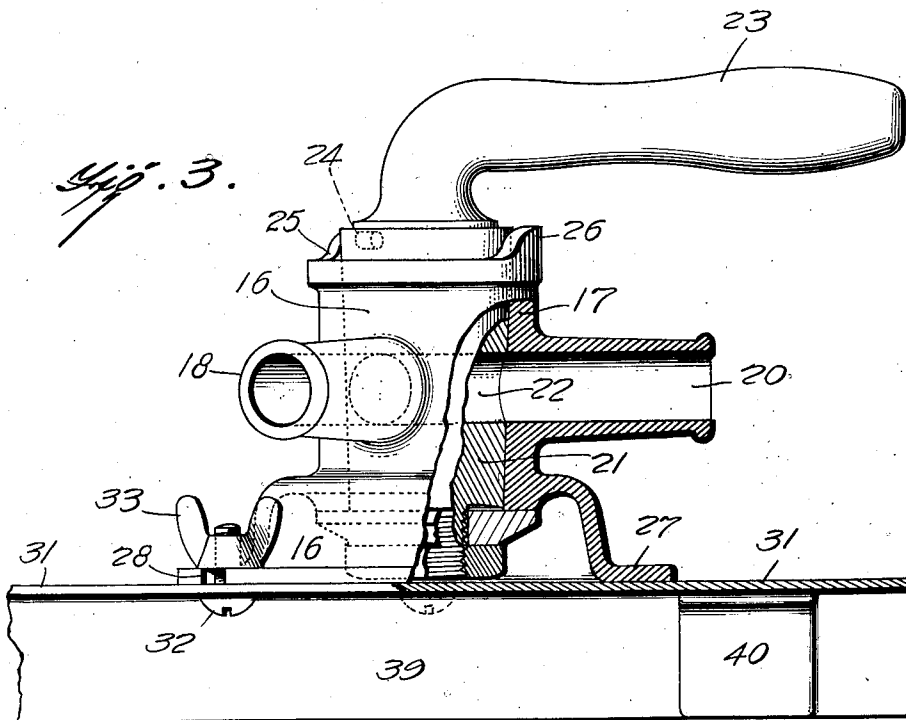
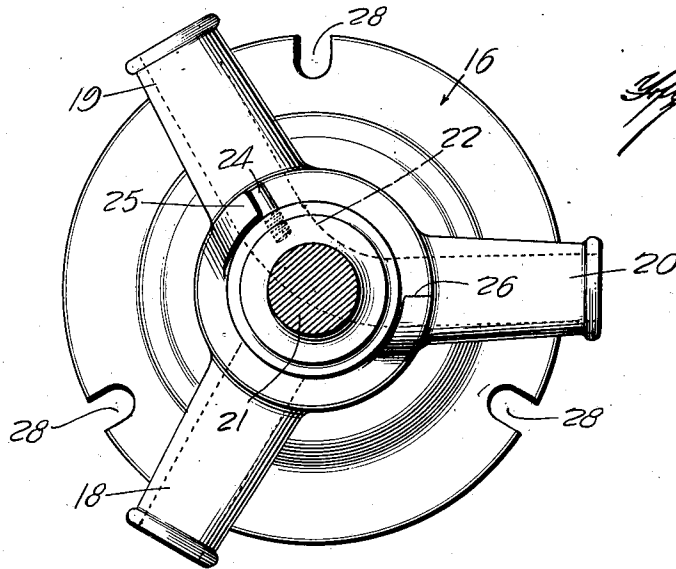
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3 Sheets-Sheet 2



By

Inventor
HARDY V. HUGHENS,
S. George Tate Attorney

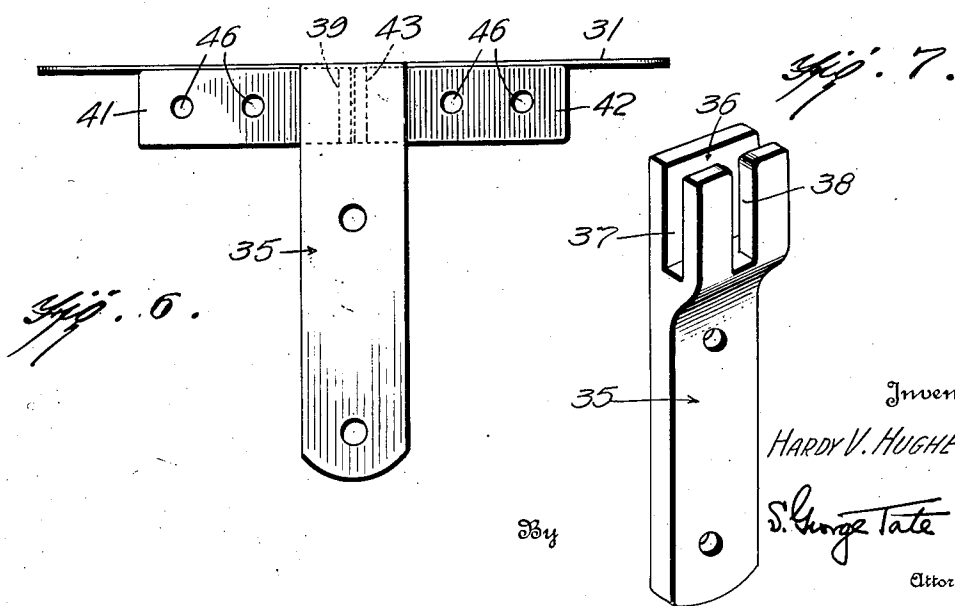
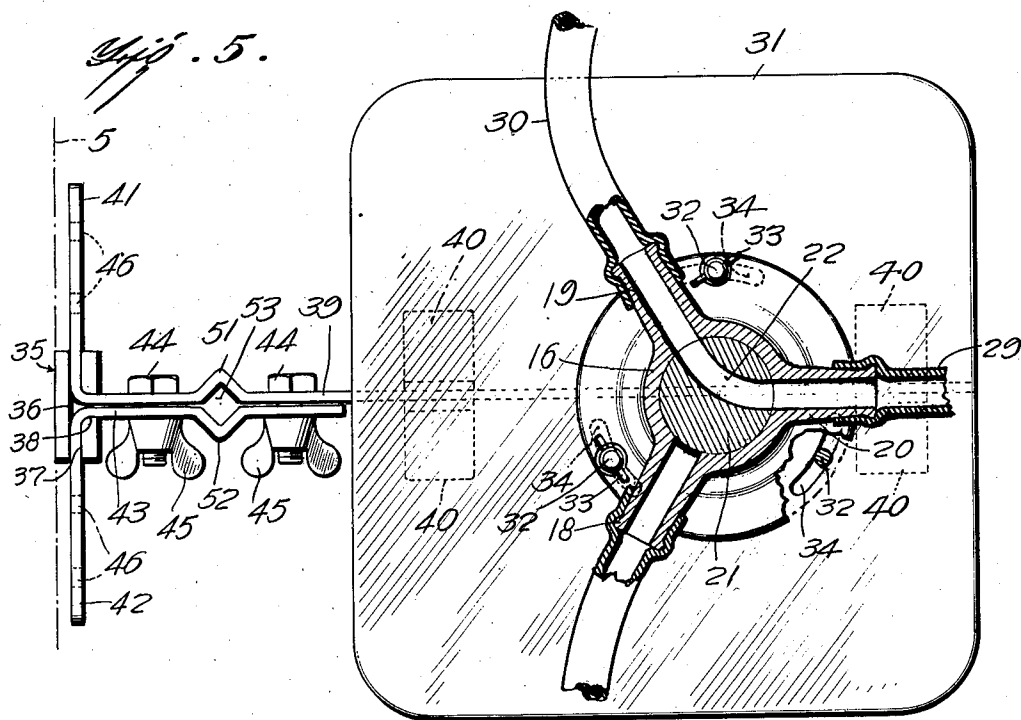
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UNITED STATES PATENT OFFICE.

HARDY V. HUGHENS, OF SHREVEPORT, LOUISIANA.

COLONIC IRRIGATING APPARATUS.

Application filed September 4, 1924. Serial No. 735,827.

To all whom it may concern:

Be it known that I, HARDY V. HUGHENS, a citizen of the United States, residing at Shreveport, in Caddo Parish, and State of Louisiana, have invented certain new and useful Improvements in Colonic Irrigating Apparatus, of which the following is a specification.

This invention relates to new and useful improvements in colonic irrigating apparatus.

One of the principal objects of the invention is to provide such an apparatus which ordinarily may be detachably connected with the hot and cold water pipes and with the drain pipe located in the physiotherapy department of a hospital, but which may be disconnected and transported for use in any room in the hospital. Another object of the invention is to provide a 3-way valve interposed between the fluid container, the colon tube, and the drain tube, and to provide a tubular passage in the valve having a diameter substantially equal to the diameter of each tube whereby an unobstructed passage from the colon tube to the drain tube will be maintained.

A further object of the invention is to provide a shelf for supporting the valve and to provide a single attaching means whereby said shelf may be either attached to the wall of the physiotherapy department of a hospital, or to a portable standard which supports the liquid container and which is located in any other room in the hospital.

With these and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings which embody the preferred form of my invention,

Figure 1 is a side elevation of the apparatus showing the same connected to the hot and cold water pipes and to the drain pipe;

Figure 2 is a side elevation showing the apparatus set up for use in a hospital room other than in the physiotherapy department;

Figure 3 is an enlarged side elevation of

the valve showing the same attached to the shelf, parts thereof being shown in section;

Figure 4 is a top plan view of the valve, the valve stem being shown in section;

Figure 5 is a top plan view of the shelf showing its application to a supporting wall, the valve being shown in section;

Figure 6 is a rear elevation of the shelf and its wall bracket; and

Figure 7 is a perspective view of the wall bracket.

Like reference numerals designate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, 5 designates the wall of a physiotherapy department of a hospital, 6 the drain or waste pipe and 7 and 8 the hot and cold water feed pipes. The hot and cold water feed pipes 7 and 8 extend upwardly and over a common outlet pipe 9, there being a control valve 10 interposed therebetween whereby the amount of cold or hot water may be regulated. In the common outlet pipe 9 there is located a single control valve 11. The pipe 9 extends upwardly above the valve 11 and has its upper end rebent to form a downwardly extending discharge nozzle 12.

A container 13 having an open upper end disposed below the discharge nozzle 12, is supported upon the upper end of the pipe 9 by a chain 14. This container is adapted to contain either hot or cold water, or a mixture thereof, or a medicament, and is provided at its lower end with a discharge tube 15 having its lower end connected to a 3-way valve 16.

The valve 16 comprises a valve casing 17 having a plurality of nipples 18, 19, and 20 extending radially therefrom. Within the valve seat there is rotatably mounted a valve stem 21 which is formed with a tubular passage 22 adapted upon rotation of the stem to communicate with the nipples 19 and 20, or with the nipples 18 and 20. Associated with the stem is a laterally extending handle 23, and a stop pin 24 which is adapted to alternately engage stop shoulders 25 and 26 formed on the valve casing and thereby limit the rotation of the valve so as to align the passage 22 with the nipples 19 and 20 or with the nipples 18 and 20. The valve casing 17 is provided with a supporting base flange 27 which is preferably circular in contour and formed

of a plurality of inwardly extending radial slots 28, said slots being respectively positioned between adjacent nipples.

The discharge tube 15 from the container 13 is connected at its lower end to the nipple 18. A colon tube 29 has its inner end connected to the nipple 20. A discharge tube 30 has one end connected to the nipple 19 and the other end to the drain or waste pipe 6. It is to be noted at this point that the diameter of the passage 22 of the valve stem is substantially of the same diameter as the interior diameter of the nipples 20 and 18, and of the tubes 29 and 30 which are respectively connected thereto. As a result, there is a tubular passage from and including the colon tube 29 through the valve 16 and through the drain tube 30. This is a very important feature as it creates an unobstructed passage from the colon tube 29 to the drain tube 30.

The valve 16 is detachably supported upon a shelf 31 by means of screws 32 and nuts 33, the screws passing upwardly through arcuate slots 34 formed in the shelf and through the respective radial slots 28 of the valve casing. By reason of the slots 28 being respectively disposed between the nipples of the valve casing, access to the clamping nuts 33 may be readily had, and by reason of the arcuate slots 34 the operator may radially adjust the valve casing so as to position the same together with the tubes connected therewith at any angle to suit his convenience.

In order to detachably support the shelf on the wall 5 of a physiotherapy or other department of a hospital, I have provided a wall bracket 35 which is fixedly secured to the wall by means of suitable screws. The upper end of the bracket is provided with a vertically disposed T-shaped slot 36 which includes a head portion 37 and a neck portion 38.

In order to detachably support the shelf 31 on the wall bracket 35, I have attached to the under side of the shelf an arm 39. This arm 39 is formed from a single length of strap metal and the shelf 31 is supported on the upper edge thereof by means of braces 40, the arm 39 being disposed centrally under the shelf and permanently secured thereto by any suitable fastening means. For instance, the shelf may be formed of sheet metal having its upper surface enameled. If a shelf of this character is employed, the supporting arm 39 and the braces 40 may be welded to the under face of said shelf. The arm 39 extends outwardly from the shelf and terminates in a laterally extending foot 41 disposed in spaced relation to said shelf. Detachably connected to the outwardly extending portion of the arm 39 is an oppositely extending foot 42, said foot being attached to the arm 39 through

the medium of a supporting shank 43 which is disposed against the face of the projecting portion of the arm 39 and is clamped thereto by means of bolts 44—44 and nuts 45—45. The feet 41 and 42 fit within the head 37 of the T-shaped slot 36 of the wall bracket 35, and the arm 39 together with the shank 43 of the foot 42, fit within the neck 38 of said T-shaped slot 36. Thus, although the shelf 31 is firmly supported on the wall by the bracket 35, it can be readily detached therefrom if desired.

Under some conditions it may be desirable to permanently attach the shelf 31 to the wall 5. In this case the bracket 35 is dispensed with and the feet 41 and 42 are secured directly to the wall by means of attaching screws which pass through openings 46 formed in said feet 41 and 42.

When it is desired to use the apparatus in any room in the hospital other than in the physiotherapy department, I provide a stand 46 which preferably comprises upper and lower telescopically arranged parts 47 and 48, the upper part being vertically movable relative to the lower part and held in an adjusted position by means of a clamping screw 49. The upper end of the part 47 of the standard is curved laterally and provided with a supporting hook 50 which is adapted to be engaged by the chain 14 of the container 13 and thereby support the latter. The shelf 31 is supported by the same arm 39 and cooperating shank 43. In this case however the arm and shank are respectively bent outwardly between the clamping nuts 44, as at 51 and 52 to form an adjustable seat 53 for extending about the upper part 47 of the standard 46. It will be observed that the shelf may be readily attached to the standard by simply unscrewing the nuts 45, removing the shank 43, then positioning the seat 53 around the standard, and finally securing the parts against movement by the nuts 45. It will also be observed that by this construction the shelf will be firmly supported to standards of different sizes within defined limits. When the shelf is thus attached to a standard, the drain tube 30 or a longer one if necessary, has one end attached to the nipple 19 of the valve casing 16, and the other end disposed within a bucket 54.

It will be observed that the tubes have frictional engagement with the nipples 18, 19 and 20, and the drain tube 30 has frictional engagement with the drain pipe 6. This permits of easy assembly and disassembly whenever occasion requires.

It will also be observed that I have provided a shelf with means for either attaching the same to a wall bracket, or for clamping the same to a vertical standard without making any changes whatsoever in the attaching portions of the shelf.

In operation, the valve stem 21 is turned to the position shown in Figure 4 whereby the liquid from the container will pass directly through the valve and thence through the colon tube to the patient, the valve in this position closing the drain nipple 18. After sufficient liquid has been delivered to the patient, it is desirable to drain the latter. For this purpose it is only necessary to turn the valve stem 120° so as to register the passage 22 of the valve stem with the nipples 18 and 20. This movement of the valve stem necessarily closes the nipple 19, and consequently shuts off the supply from the container. The inner diameters of the colon tube 29, nipple 20, passage 22, nipple 18, and drain tube 30, being uniform, it follows that an unobstructed drain passage through the entirety has been provided for, and consequently all danger of stopping or clogging of the drain pipe connections is eliminated.

It is of course to be understood that the details of structure and arrangement of parts may be variously changed and modified without departing from the spirit and scope of my invention.

I claim:

1. In a colonic irrigating apparatus, the combination with a liquid container, of a supply pipe leading from said container, a colon tube, a drain tube, and a 3-way valve having radially extending nipples connected with said supply pipe and tubes, the interior of each nipple connected with the

tubes forming a passage which is circular in cross section, said valve having an arcuate transverse passage which is circular in cross section and which is adapted for registry with the passages of the nipples connected with said tubes, the interior diameters of the tubes and passages being uniform throughout their lengths.

2. In a colonic irrigating apparatus, the combination with a liquid container, of a supply pipe leading from said container, a colon tube, a drain tube, a support, a 3-way valve connected with said tubes and mounted directly on said support, said valve including a base having arcuate slots therein, and means extending through said slots for connecting said valve and support whereby the former may be adjusted radially on the latter.

3. In a colonic irrigating apparatus, the combination with a liquid container of a supply pipe leading from said container, a colon tube, a drain tube, a support, a 3-way valve connected with said tubes and mounted directly on said support, said valve having a base and equally spaced nipples extending laterally above the base and connected with said tubes, and means cooperating with the base and support and respectively disposed between adjacent nipples for detachably securing the valve to the support.

In testimony whereof I hereunto affix my signature.

HARDY V. HUGHENS.