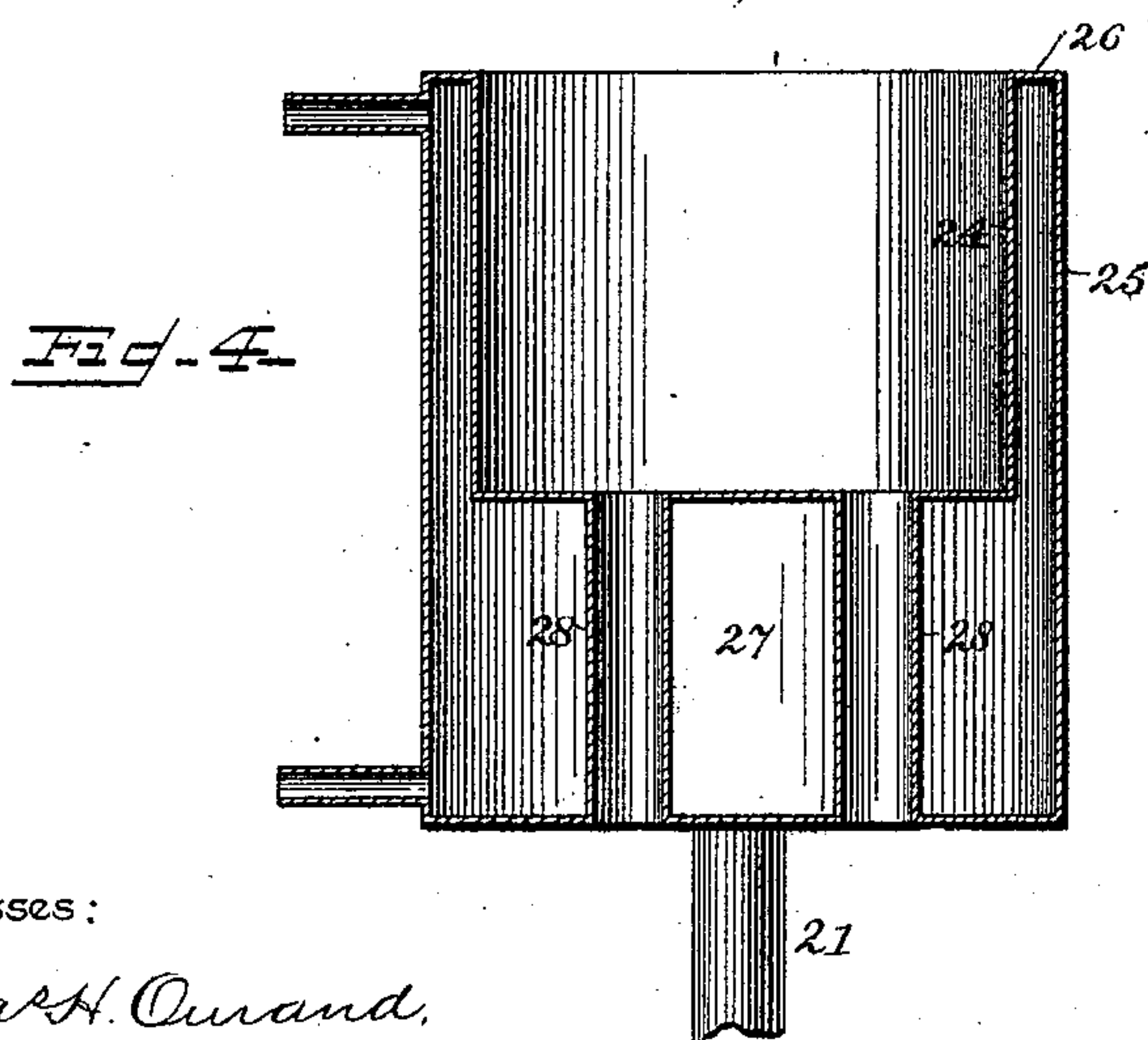
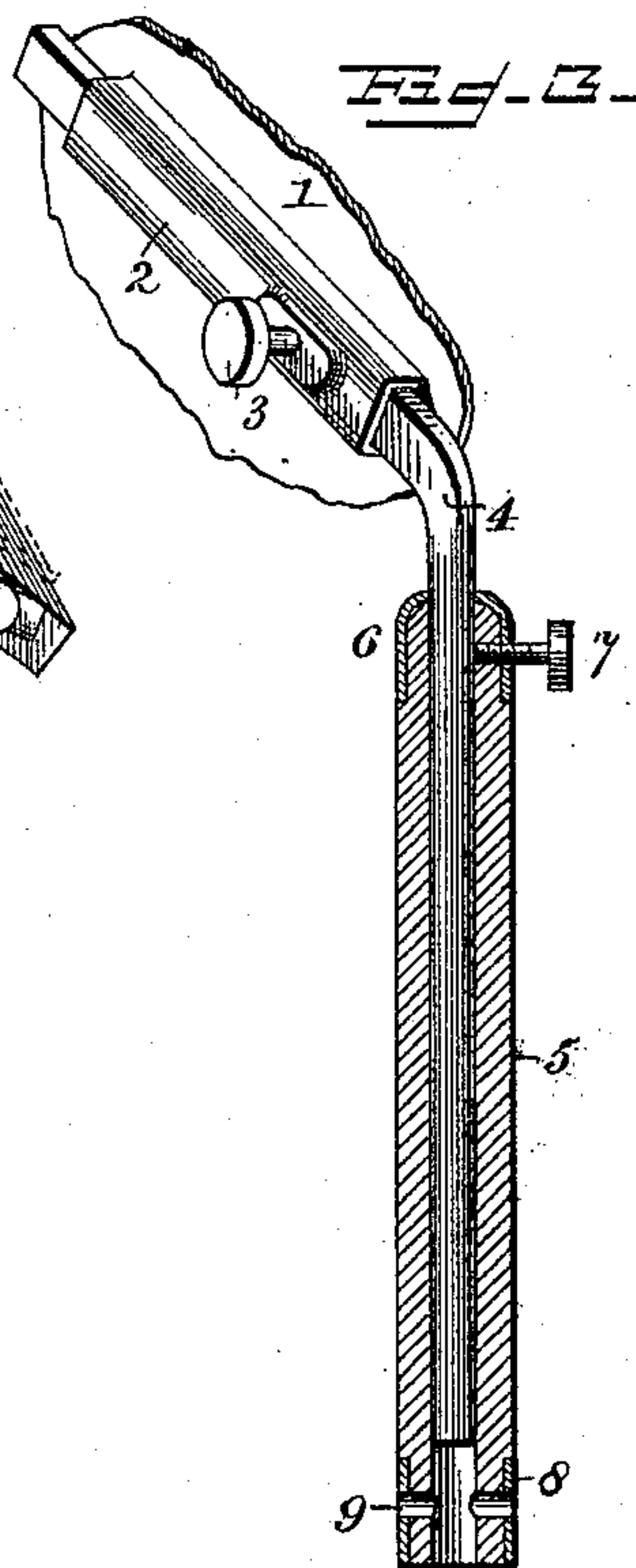
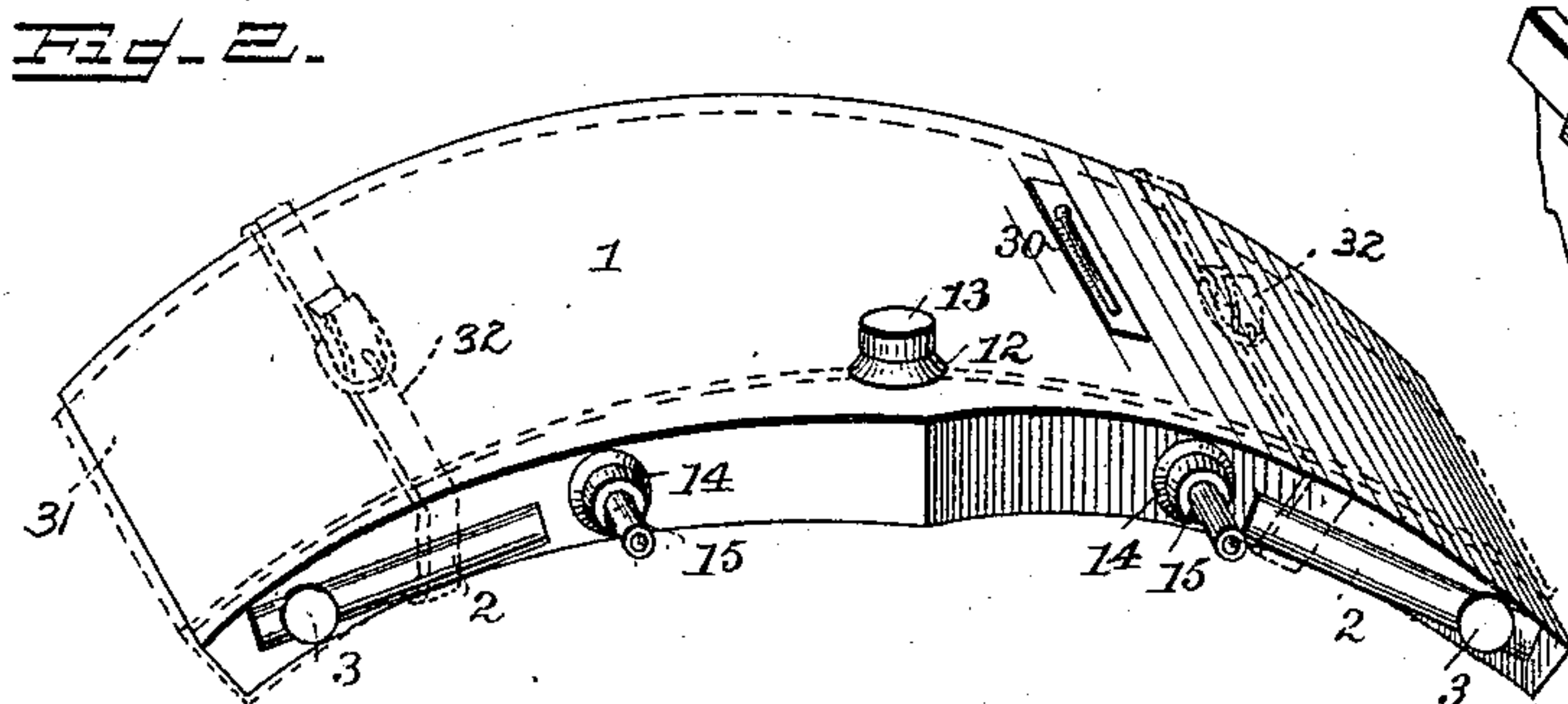
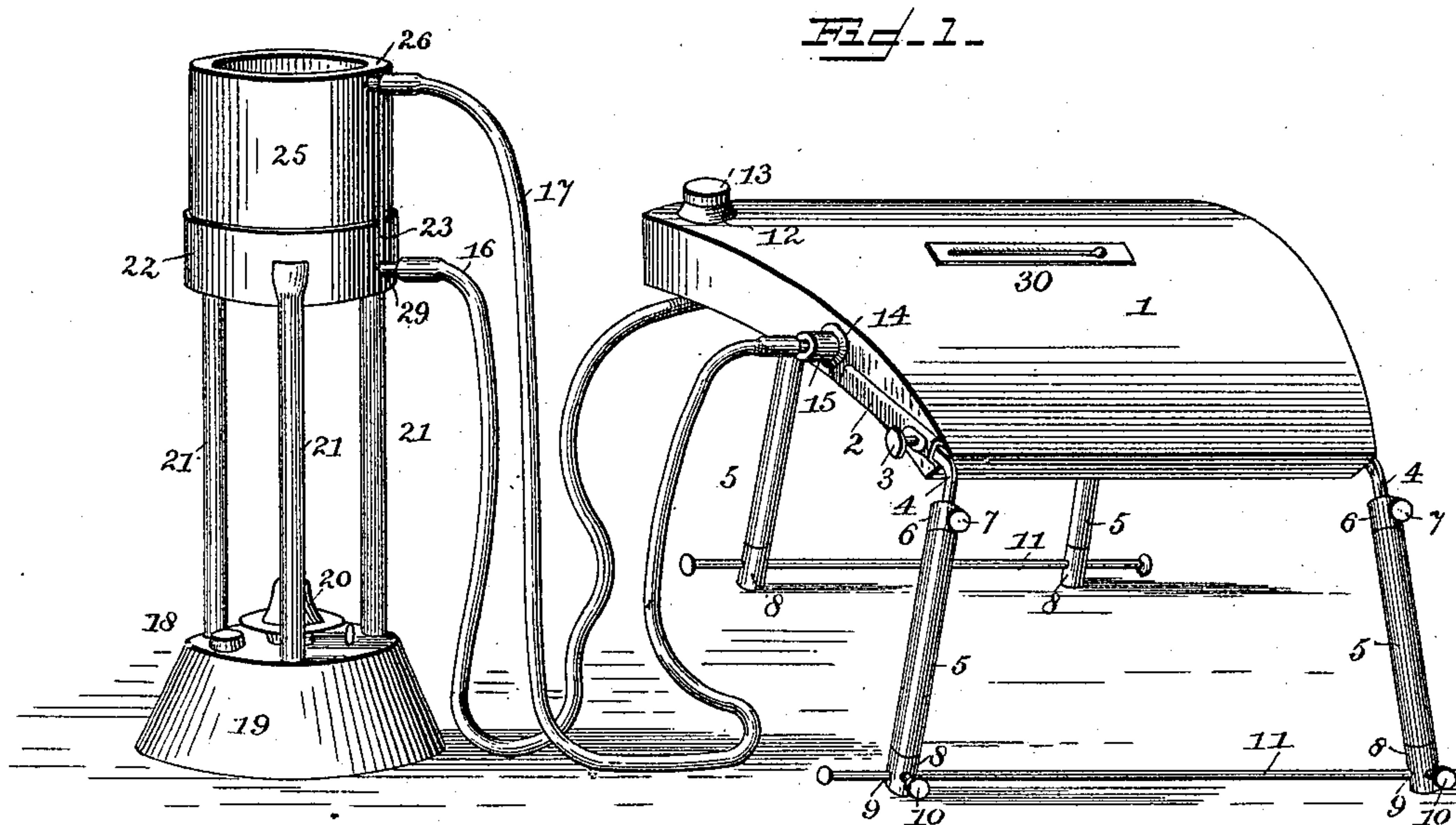


(No Model.)

S. M. SAPP.
SURGICAL APPARATUS.

No. 486,198.

Patented Nov. 15, 1892.



Witnesses:

Chas H. Curand.

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Inventör

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UNITED STATES PATENT OFFICE.

SAMUEL M. SAPP, OF GENESEO, KANSAS, ASSIGNOR OF ONE-HALF TO JOHN G. MCENTARFER AND JEREMIAH M. MCENTARFER, OF SAME PLACE.

SURGICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 486,198, dated November 15, 1892.

Application filed April 14, 1891. Serial No. 388,878. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. SAPP, a citizen of the United States, residing at Geneseo, in the county of Rice and State of Kansas, have invented a new and useful Surgical Apparatus, of which the following is a specification.

This invention relates to improvements in hot-water appliances for use in connection with patients suffering from inflammation of the stomach or bowels.

The objects in view are to provide an article of cheap and convenient construction adapted to be adjustably supported above the body of the patient and out of contact therewith, to provide means for readily heating the water therein and maintaining the same at a desired and even temperature, and to adapt the apparatus as a whole for convenient packing.

Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a general or perspective view of a hot-water apparatus constructed in accordance with my invention. Fig. 2 is an enlarged detail in perspective of the hot-water tank. Fig. 3 is a longitudinal section and partial side elevation of one of the supporting-legs. Fig. 4 is a detail in vertical section of the heating-tank.

Like numerals indicate like parts in all the figures of the drawings.

The hot-water tank 1 is preferably formed of sheet metal, is therefore hollow, and is made arched or curved, so as to approximate the human body in section. The tank is provided at its ends with inclined sleeves 2, in each of which is mounted removably and adjustably by a set-screw 3 the upper end of a leg-section 4. The sections 4 may be adjusted in and out the sleeve 2 so as to spread the legs and embrace differently-sized persons. To the upper sections 4 are telescopically connected the lower bored sections 5, so that the legs may be lengthened and shortened to accommodate the apparatus to different persons and bring the tank nearer to or farther

from the body of the patient. The sections 5 are provided with ferrules 6 at their upper ends, through each of which is passed a set-screw 7, the inner end of which binds upon an upper section, so that an adjustability of the leg-sections is secured. The lower ends of the lower sections are provided with ferrules 8, having transverse eyes 9, in which terminate set-screws 10, which bear upon headed rods 11, connecting the lower ferrules of each pair of legs, serving to stiffen the support and act as feet.

At the upper side of the tank is located a vent 12, covered by a threaded cap 13. Through this vent cooling agents may be introduced into the tank, and the apparatus thereby adapted for use in surgical operations.

At one edge the tank is provided with threaded vents 14, from which extend nozzles or nipples 15, over which are stretched or sprung a pair of rubber tubes 16 and 17. When used to cool, the threaded vents 14 are removed and imperforate caps substituted, as the cap 13 of the vent 12.

For the purpose of heating the water I employ an ordinary oil-lamp 18, having a base 19 and a burner 20. From the base rises vertical standards 21, which support a ring 22, provided at one side with a slot 23.

The water-heater consists of an inner and outer shell 24 and 25, respectively, the upper ends of which are connected by an annular wall 26. The inner shell is the smallest of the two and has its bottom terminating considerably above the bottom of the outer shell. It will thus be seen that the two shells combine to form a water-space 27. The two bottoms are connected by a pair of tubes 28, open at both ends and serving to carry off the surplus heat.

The above-described water-heater is mounted in position upon the ring of the lamp and is connected at its lower end by a nipple 29 to the end of the tube 16, while at its upper end it is connected to the end of the tube 17.

In operation it will be observed that the hot water will be kept continually circulating through the hot-water tank 1, the two tubes, and the heater. Such circulation may be maintained as long as desired, and the

heat-applying device does not require removing and recharging, thus necessitating no exposure of the patient. By manipulating the wick of the lamp the temperature of the water may be regulated, and may be observed

5 by a thermometer 30, secured to the tank 1. Ordinarily the apparatus will give off a dry heat, but in some cases it is desirable to radiate a moist heat. To secure this, as shown

10 by dotted lines in Fig. 2, I may secure by straps and buckles 32 a flannel section 31, dampened and surrounding the tank 1. By removing the heater from the lamp and the tubes from the tank 1 these parts may be

15 conveniently stored. The legs may be telescoped and removed and the entire apparatus stored away when not in use. Furthermore, when in use it will be seen that the tank 1 is supported above and out of contact with

20 the body, so that no weight is thrown upon the body, and also the bedclothes supported.

Having described my invention, what I claim is—

The combination, with the tank provided with the sleeves at its four corners, of the 25 upper angular leg-sections, the set-screws mounted in the sleeves, the lower bored hollow sections receiving the upper sections, the ferrules at the upper ends of the lower sections, the set-screws therein, the ferrules at 30 the lower ends of the lower sections, provided with eyes, the set-screws terminating in the eyes, and the headed rods connecting the eyes of each pair of legs, substantially as specified.

In testimony that I claim the foregoing as 35 my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL M. SAPP.

Witnesses:

S. H. ROPER,

J. W. EWINGS.