

No. 775,719.

PATENTED NOV. 22, 1904.

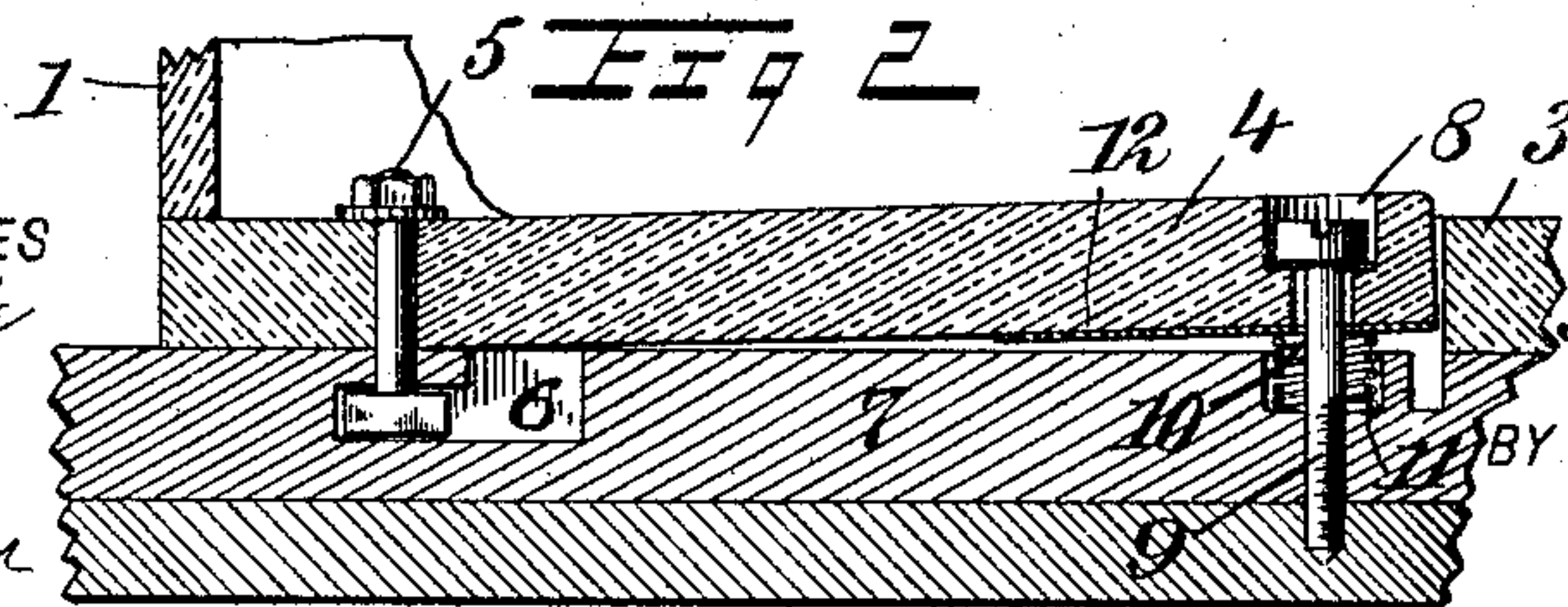
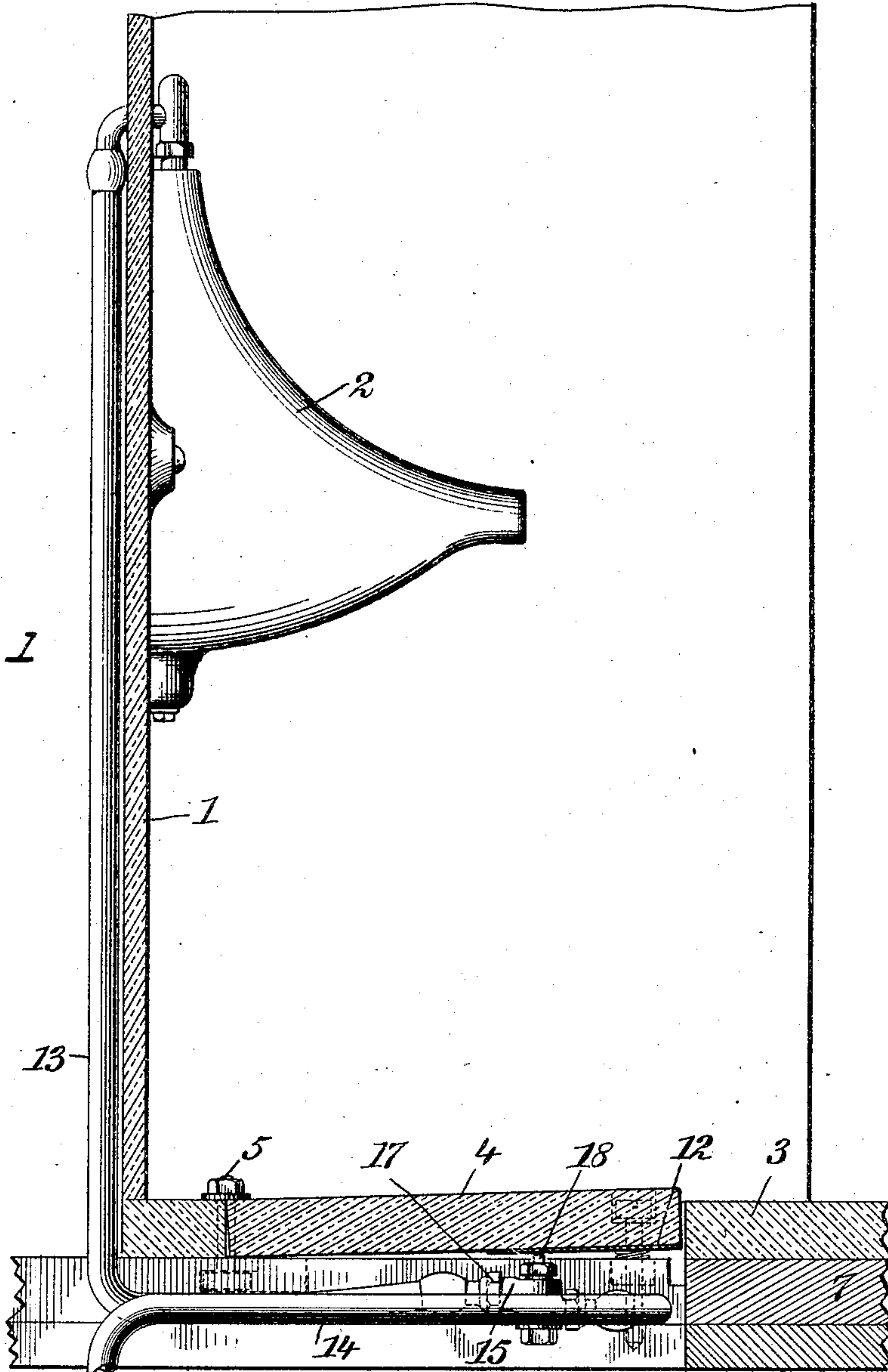
A. C. DAVIDSON.
FLUSHING DEVICE.

APPLICATION FILED MAY 7, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig 1



WITNESSES
John J. Kittle
Rayton Morton

INVENTOR
Arthur C. Davidson
BY *Mumford*
ATTORNEYS

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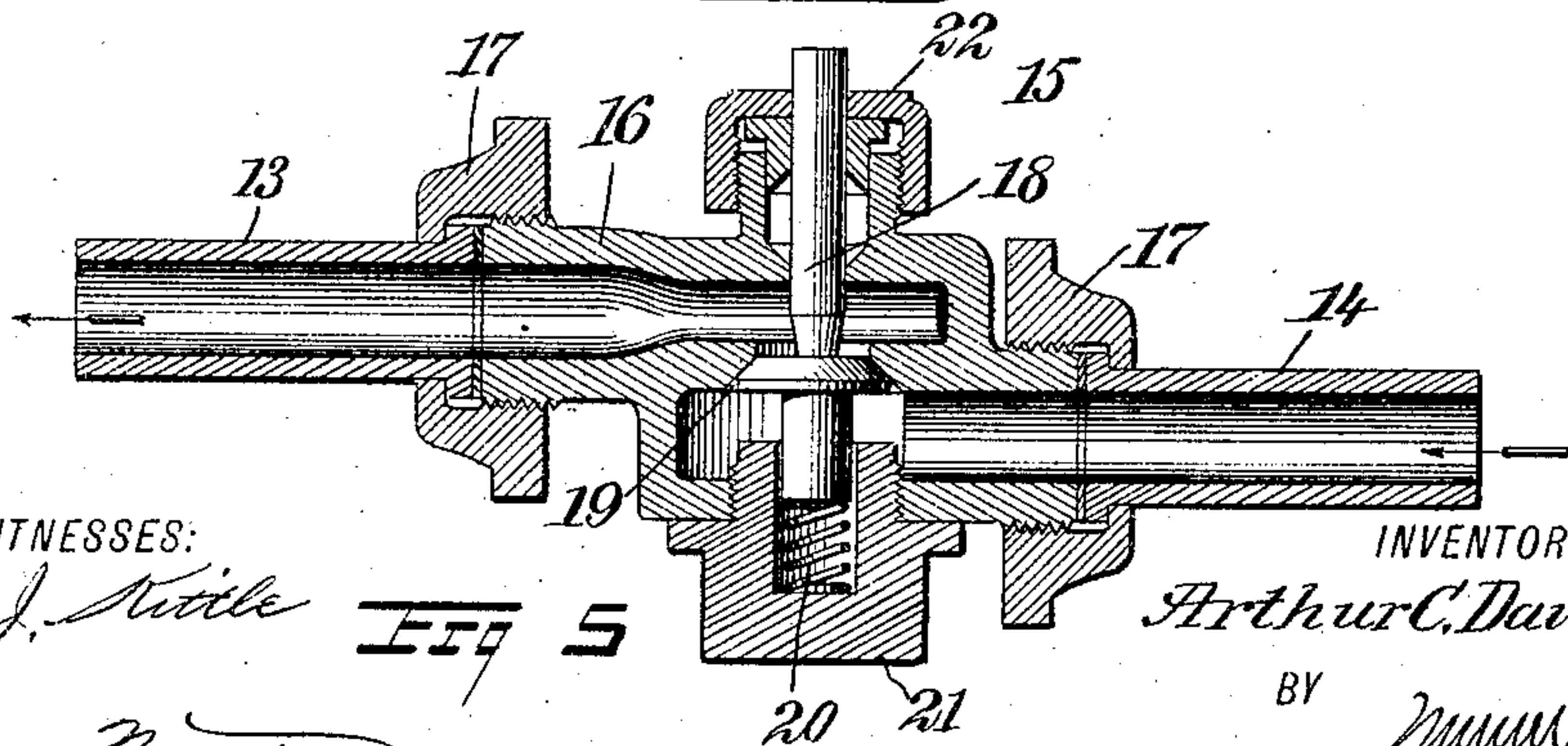
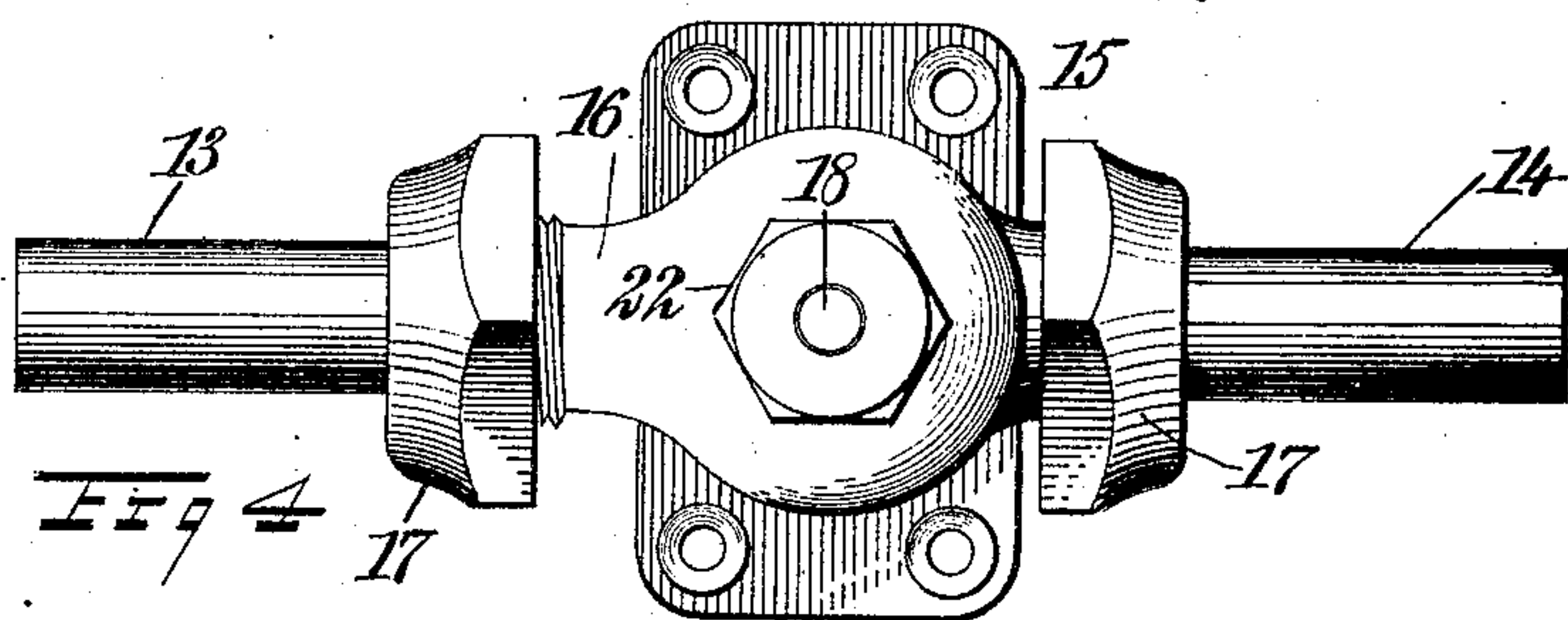
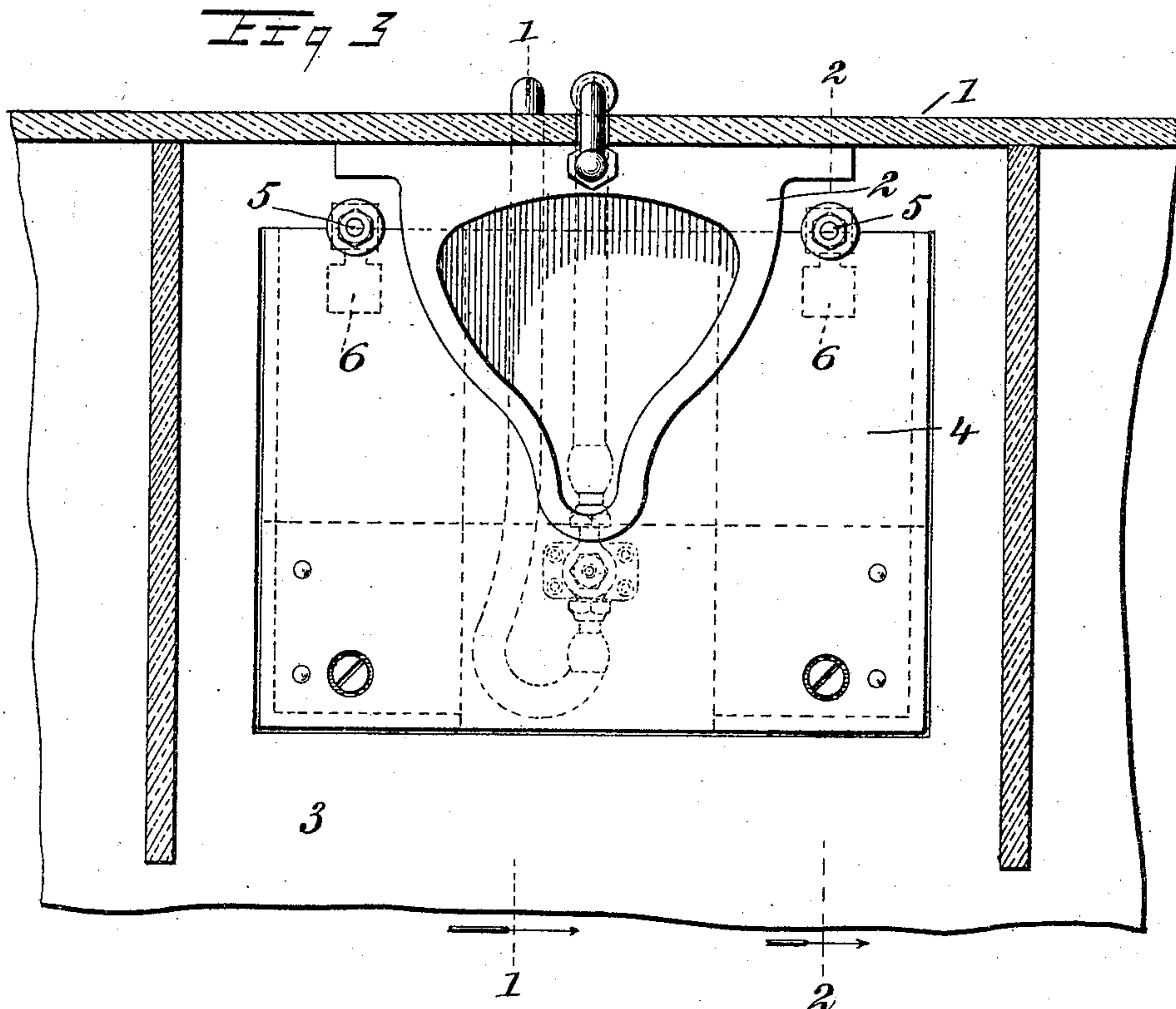
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NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES:

John J. Kittle
Charles Morton

Fig 5

INVENTOR

Arthur C. Davidson

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UNITED STATES PATENT OFFICE.

ARTHUR C. DAVIDSON, OF CHICAGO, ILLINOIS.

FLUSHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 775,719, dated November 22, 1904.

Application filed May 7, 1904. Serial No. 206,891. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. DAVIDSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Flushing Device, of which the following is a full, clear, and exact description.

This invention relates to flushing devices, and more especially to flushing devices positively controlled by movable foot-plates operatively connected with valves for controlling the flow of water or other flushing liquid.

The principal object of the invention is to provide an improved flushing device of this character which will be characterized by great simplicity of construction, which will be inexpensive to manufacture, and which will be positive in operation and unlikely to become deranged or injured from service.

A further object of the invention is to provide a flushing device of this type which will be nearly automatic in action, being set in operation by the pressure of the feet of a person standing near the basin or hopper to be flushed, and which will act automatically to cut off the flow of water when the pressure upon the foot-plate is removed.

The objects above stated and others of minor character, which will hereinafter appear, are attained by means of the novel construction and combination of parts of a flushing device as hereinafter described and having the novel features thereof particularly pointed out in the appended claim, it being understood that minor structural changes may be made in the structure described within the scope of the appended claim without departing from the spirit of the invention.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical sectional view upon the line 1 1 of Fig. 3, showing a basin or hopper supplied with a flushing device in accord with the present invention. Fig. 2 is a sectional view upon the line 2 2 of Fig. 3. Fig. 3 is a plan view of a basin or hopper supplied with a flushing device in accord with the present invention. Fig. 4 is a top plan view of

the preferred form of flushing-valve, and Fig. 5 is a longitudinal sectional view through the preferred form of flushing-valve and the adjacent pipe-sections.

Referring to the drawings by reference characters, 1 represents a vertical wall or partition upon which a basin 2 of ordinary form is mounted, and 3 designates the flooring in front of and below the basin. A foot-plate 4 is let into the floor and movably secured therein by means of bolts 5, the heads of which are secured in recesses 6 in a floor-supporting member 7. At its forward margin the foot-plate 4 is pierced by counterbored openings 8, through which screws 9 extend downward into the floor-supporting structure. The screws 9 are encircled by coiled springs 10, resting in recesses 11, provided therefor in the floor-supporting member 7, and these springs press upward against wear-plates 12, provided on the under surface of the foot-plate 4, forcing the plate upward, so as to raise the forward margin thereof slightly above the level of the floor 3, the amount of elevation of the forward margin of the foot-plate being determined by the position of the heads of the screws 8.

A flushing-pipe 13 extends from beneath the floor to the upper part of the basin 2, and a supply-pipe 14 supplies the water to the pipe 13. Between the pipes 13 and 14 a valve (designated generally as 15) is interposed to control the supply of water to the basin. The valve 15 comprises, preferably, a casing 16, having externally-threaded branches corresponding to the pipes 13 and 14, with which the said branches are connected by unions 17 in the ordinary manner. Within the casing 16 a valve member 18 is arranged for vertical sliding movement, and this valve member cooperates with a suitable valve-seat 19, formed within the casing. A spring 20 keeps the valve normally closed, and this spring is preferably supported in a removable cup or socket 21, which is threaded in the bottom of the valve-casing. The stem of the valve projects upward through a stuffing-box 22, removably secured upon the top of the valve-casing, and is disposed beneath the wear-plate 12, provided on the under side of the foot-piece 4, the upper end of the valve-stem being nor-

mally in contact with the plate 12 when no pressure is applied to the foot-plate and the valve is closed.

The operation of the device will be readily understood from the foregoing description. When the foot-plate 4 is raised, as shown in Figs. 1 and 2, by the springs 10, the valve 15 is completely closed and no water passes therethrough. When, however, a person approaches the basin 2 and his weight is brought to bear upon the forward portion of the foot-plate 4, the pressure thereon will cause the compression of the springs 10 and the descent of the foot-plate. The downward movement of the foot-plate will cause the depression of the valve member 18 against the force exerted by the spring 20, and the valve will at once be opened, permitting water or other flushing liquid to flow from the supply-pipe 14 through the valve-casing into the flushing-pipe 13, from which it is delivered to the basin in the usual manner. As soon as the weight upon the foot-plate is removed the action of the springs will restore the plate to its normal position and the flow of water through the flushing device will be cut off. It will thus be seen that as long as the basin is in use the flow of water through the flushing device is automatically maintained; but as soon as the use of the basin ceases and the user thereof moves away the flow of water or other flushing liquid is cut off at once.

It will be observed that a flushing device as above described is an extremely simple and inexpensive construction, is positive and reliable in its operation, and that it is in a measure automatic, as it is practically impossible for the basin to be brought into use without causing the operation of the flushing device, and as soon as the use of the basin ceases the operation of the flushing device also ceases.

A special feature of advantage of the flushing device of this invention lies in the small movements of the foot-plate necessary to open

and close the valve, thus making it possible to use a foot-plate which is so supported as not to project upward sufficiently above the floor-level to cause a person approaching the basin to be tripped thereby and not necessitating the use of springs of large size or great elasticity to hold the foot-plate normally out of engagement with the valve member, while permitting the descent of the foot-plate to the extent required to operate the valve.

While I have described the invention in a preferred form of embodiment and have illustrated a type of basin and valve which may be conveniently employed in connection therewith, it is to be understood that the flushing device may be applied to a basin of any sort, and the valve illustrated may be replaced by valves or other types, if so desired, it being sufficient if the valve member be provided with a part normally supported immediately beneath the foot-plate when in elevated position and adapted to open the valve when depressed to the extent which may be brought about by the downward movement of the foot-plate.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A flushing device comprising in combination, a depressible floor-plate, a valve disposed beneath said floor-plate, a stem projecting up from said valve and resting against the under side of said floor-plate, a floor member under said floor-plate having recesses in the upper face thereof, said valve having a body with a recess under said valve, and helical springs in said recesses thrusting upwardly.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR C. DAVIDSON.

Witnesses:

ALBERT B. HOSTETLER,
ROBERT MCGINTY.