

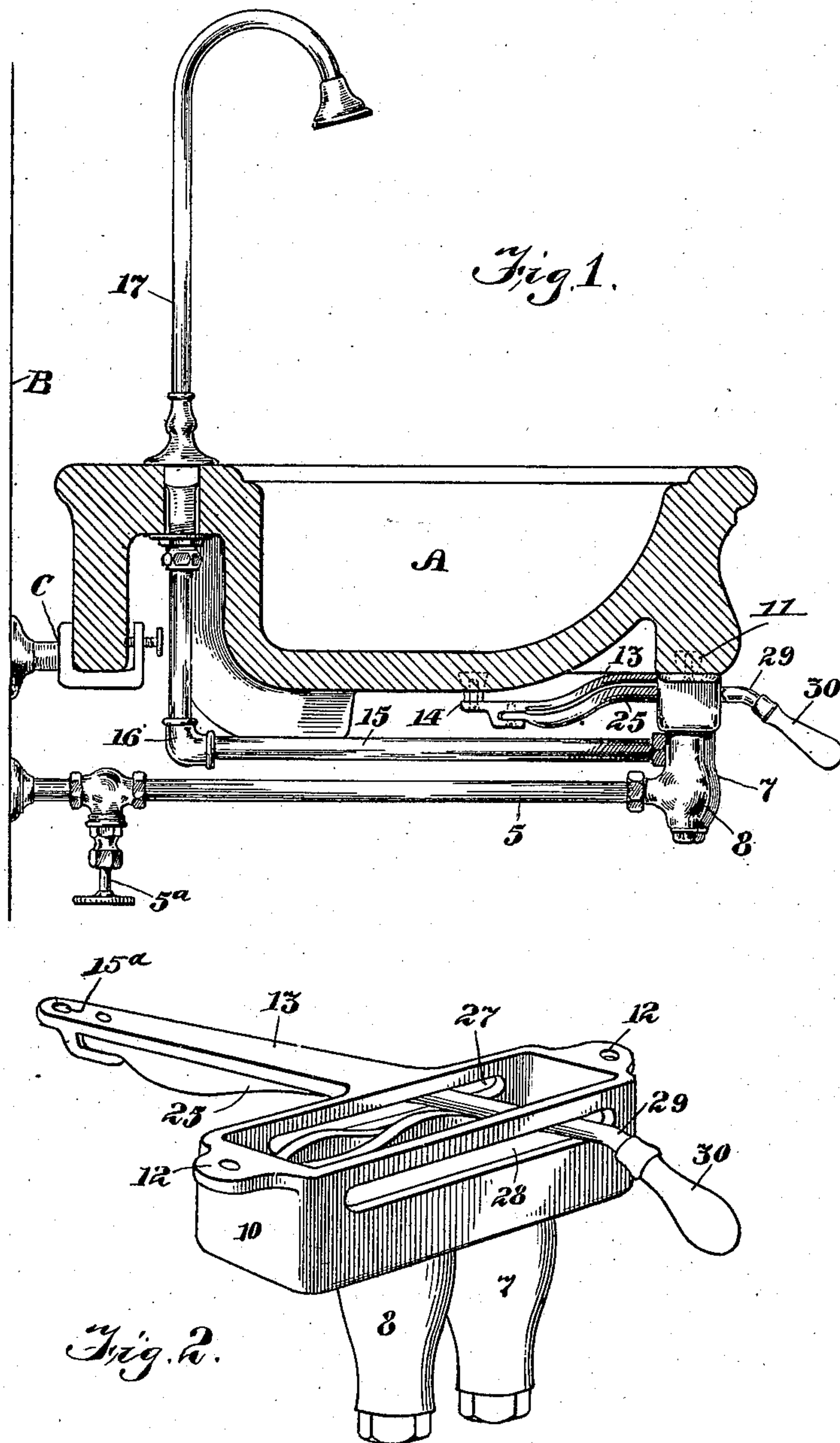
No. 867,580.

PATENTED OCT. 8, 1907.

L. M. HOOPER.  
FAUCET VALVE.

APPLICATION FILED FEB. 11, 1905.

3 SHEETS—SHEET 1.



WITNESSES:  
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*R. B. Cavanagh*

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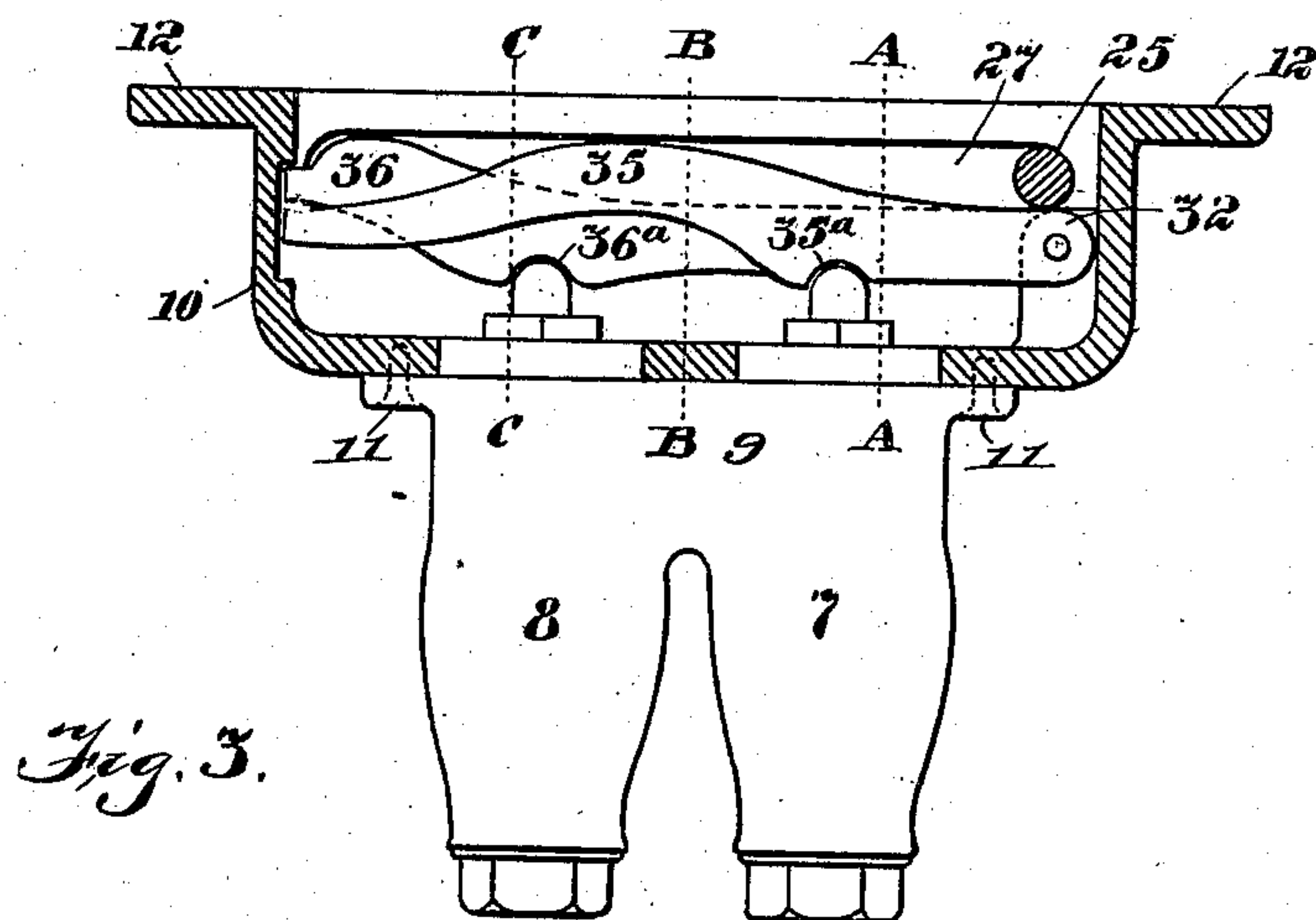


Fig. 3.

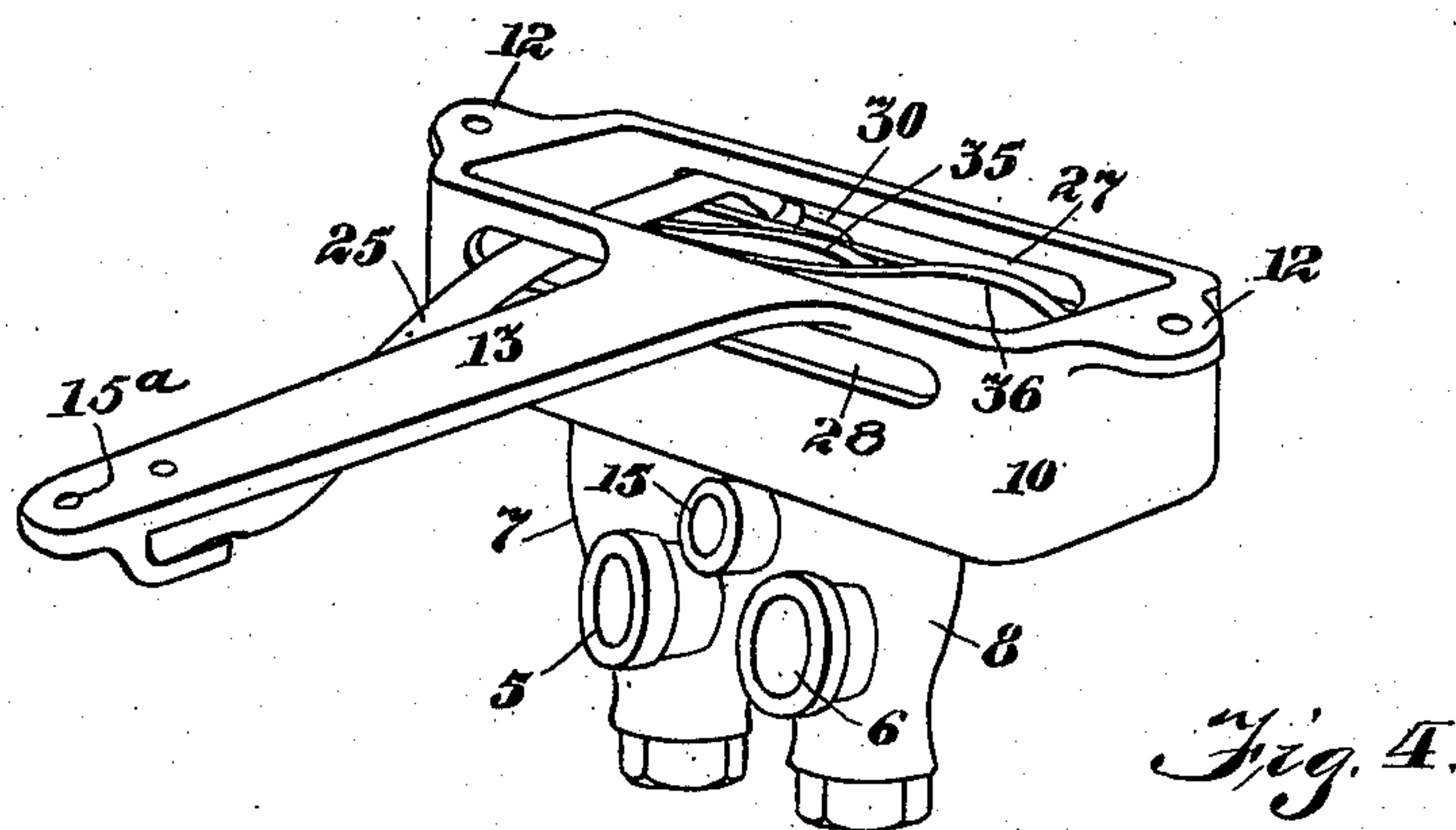


Fig. 4.

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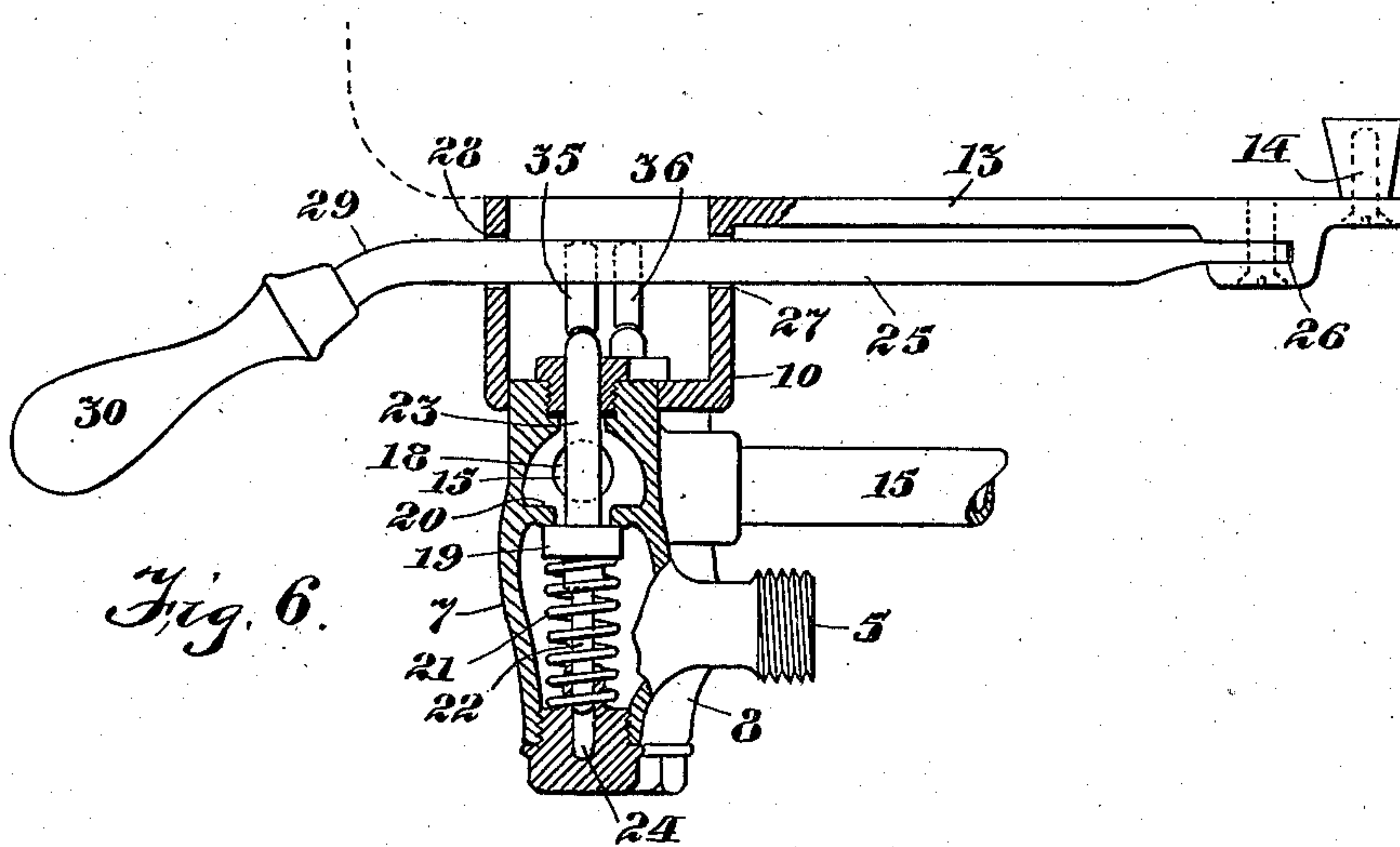
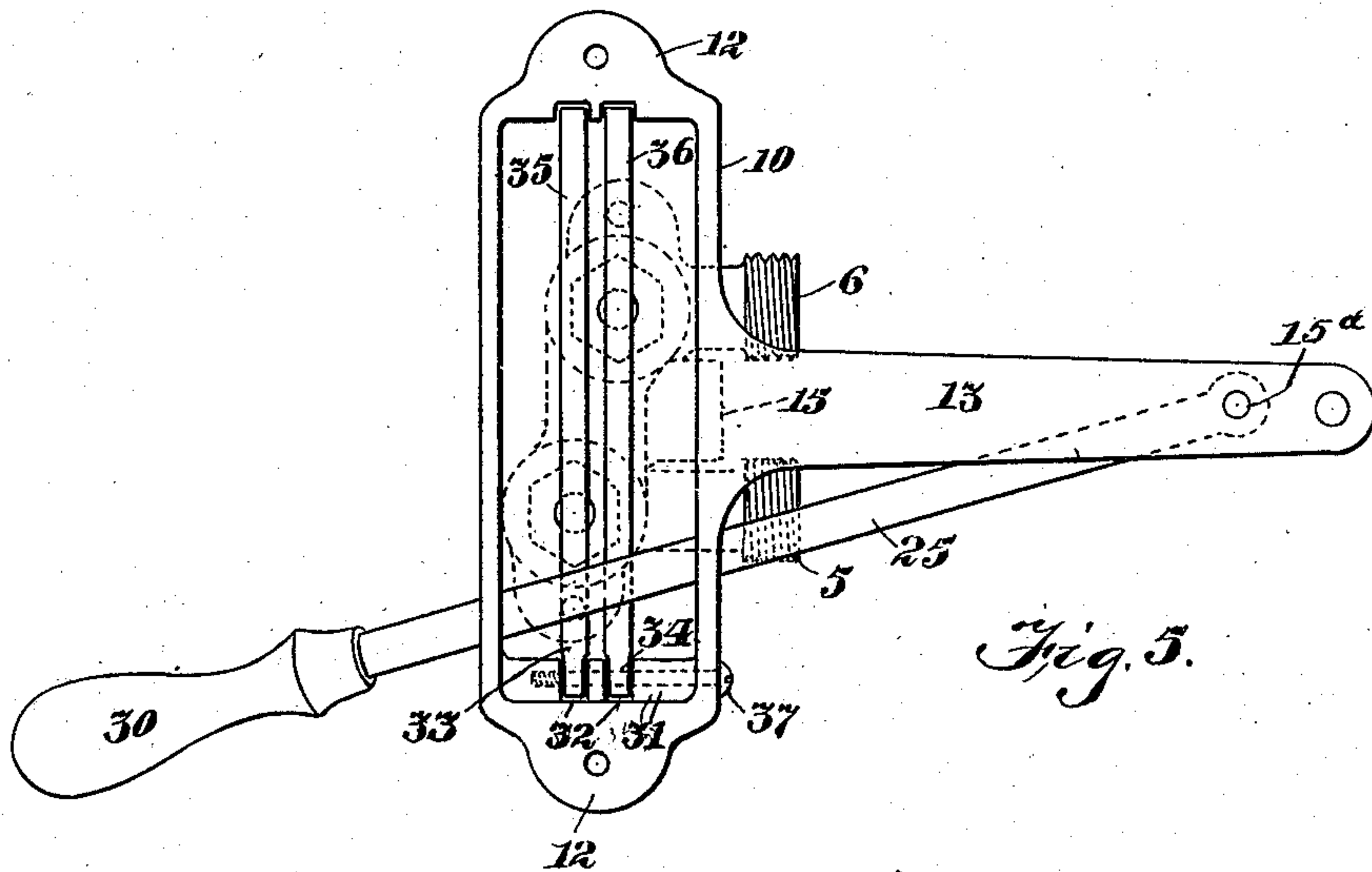
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# UNITED STATES PATENT OFFICE.

LOUIS M. HOOPER, OF RUTHERFORD, NEW JERSEY, ASSIGNOR TO THE J. L. MOTT IRON WORKS, A CORPORATION OF NEW YORK.

## FAUCET-VALVE.

No. 867,580.

Specification of Letters Patent.

Patented Oct. 8, 1907.

Application filed February 11, 1905. Serial No. 245,178.

*To all whom it may concern:*

Be it known that I, LOUIS M. HOOPER, a citizen of the United States, and a resident of Rutherford, in the county of Bergen and State of New Jersey, have invented a new and useful Improvement in Faucet-Valves, of which the following is a specification.

My invention relates to certain new and useful improvements in faucet valves, and particularly appertains to a device of the class described adapted to be used in hospitals in connection with basins, wash stands, lavatories and the like.

As is well known, in hospitals and similar institutions, it is often necessary for an attending physician or nurse, while using the hands in washing and dressing the wounds or injuries of a patient, to call upon a second party to start and stop the flow of water from the faucets of the wash-stands or basins.

It is one of the purposes of my invention to provide a faucet-valve which may be operated by the knee or leg of the party in attendance upon the patient whereby the services of a second person are dispensed with, and at the same time, the hands are free for use in the operation of washing and dressing.

To the accomplishment of this and other ends, my invention consists in the construction, combination and arrangement of parts set forth in and within the scope of the appended claims, and I wish it to be understood that I do not confine myself to all the precise details of construction and arrangement which for the purpose of illustration I have delineated, as there may be modifications and variations in certain respects without departing from the spirit or scope of the invention.

In the accompanying drawings, like characters of reference indicate similar parts in all the views, and Figure 1 is a side view partly in elevation and partly in section, of an embodiment of my invention. Fig. 2 is a perspective view looking from the front of my improved device. Fig. 3 is a vertical sectional view taken through the casing of the device and showing the position of the valve-operating arms. Fig. 4 is a perspective view of my improvement looking at the rear of the same. Fig. 5 is a top plan view, and Fig. 6 is a vertical sectional view taken through one of the valve housings; the valve and the operating lever being shown in elevation.

Referring now to the accompanying drawings in detail, A indicates a basin or wash-stand of any suitable character or type which, in the present instance, is secured to the wall B by the clamping bracket C. Extending beneath the basin are the water-supply-pipes 5 and 6 which are connected to and communicate with the separate tubular valve chambers 7 and 8, which merge at their upper portions, as at 9, and are secured to the underside of the main frame or casing 10. In this specification, for the purpose of clearness, I will des-

ignate 5 as the cold water pipe, and 6 as the hot water pipe, and each of these pipes may be provided with a cut-off valve such as is shown at 5<sup>a</sup> on the pipe 5. The body of the casing 10 is, in turn, secured to the basin A by means of screws or other fastenings 11, passing through the apertured lugs 12, and the extension arm 13, which is formed integral with the casing, is also fastened to the underside of the basin by means of a screw 14, passing through an aperture 15<sup>a</sup> at the extremity of such arm. Leading off from the casing, preferably at a point above and midway between the hot and cold water pipes, is the delivery pipe 15, elbowed at 16, and communicating with the discharge 17 mounted above the basin and adapted to deliver water thereto.

Within each of the valve chambers 7 and 8, there is arranged a valve for controlling the admission of water from its respective supply pipe to the delivery pipe 15, and as each of these valves is a counterpart of the other, a description of one will suffice for both.

Each valve comprises a spindle 18 having a valve-disk 19, screwed at approximately the center thereof; such disk being designed to bear against the underside of the inwardly extending annular seat-flange 20. The disk is held in its normally closed positions by means of the expansion spring 21 coiled about the lower portion 22 of the spindle, which portion is preferably of less cross diameter than the upper part 23 and is adapted to have its lower end seat in the vertical recess 24. The operation of actuating the valves to permit the water to pass to the faucet discharge-pipe 15 is as follows: A relatively long lever 25 has one end pivotally secured at the bifurcation 26 of the casing arm 13; the rod forming said lever extending through the long horizontally disposed slots 27 and 28 in the rear and front walls of the casing and the outer end of said lever, which is downwardly inclined, as at 29, is provided with a handle 30 through which the lever may be swung from side to side as far as the length of the slots will permit. On the inner face of one of the end walls of the casing 10, is formed a flange 31 having the cutaway portions 32 adapted to accommodate the apertured ends 33 and 34 of the parallel arms 35 and 36, respectively; said arms being pivotally secured in position by the bolt or pin 37 passing through the lug and through the apertured ends of such arms. These arms are therefore free to move vertically when actuated by the lever 25 and such arms have cutaway portions formed therein, as at 35<sup>a</sup> and 36<sup>a</sup> to accommodate the head portion of the valve stems upon which they rest, as will be seen by reference to Fig. 3. In order to have the hot water valve entirely closed when the cold water valve is wide open, and vice versa, and in order to have both valves simultaneously open half way so that both hot and cold water will be delivered to the faucet, I have constructed and arranged the



arms, as shown in Fig. 3; that is to say, the arm 35, from its pivot point to the line A, A, is slanted or inclined upward slightly and gradually while the arm 36, between such points is correspondingly downwardly inclined. Between the lines A, A, and B, B, the arm 35 is curved upward until it is in line with the top of the slots, while the arm 36 is curved downward between such points. Between the lines B, B and C, C, the arm 35 is curved downward, while the curved lever 36 is inclined upward, and between C, C, and the end of the arms, the lever 35 continues its downward inclinations while the lever 36 is upwardly curved to its highest point. It will thus be seen that these levers are reversely curved so that the operation will be as follows: Assuming that the lever is in its normally inoperative position, shown in Figs. 2 and 3, and it is desired to turn on the water, the operator pressing his knee or leg against the handle pushes toward the left; the lever immediately begins to press the arm 35 downward upon the stem of the cold water valve, and when the lever reaches the point of the line A, A, the cold water valve will be half opened and only half force of cold water will flow through the faucet. If the lever be now moved to the position indicated by line B, B, the cold water valve will be wide open and the full force will be flowing through the faucet, the hot water valve still remaining closed. Upon the lever reaching the position C, C, the pressure on the stem of the cold water valve will be partly relieved so that the expansion spring half closes the valve, while the arm 36 will be forced against the stem of the hot water valve to partly open the same, so that approximately equal volumes of hot and cold water pass to the faucet. When the lever is moved to its extreme position at the left of the casing, the cold water valve will be entirely closed while the hot water valve will be wide open. To entirely close the valves, the lever is swung back to its original position. It is to be noted that I have provided an exceedingly simple means for operating

faucet-valves, which means may be actuated either by hand or, when necessary, by the knee, leg or other portions of the body of the operator. By causing the cold water valve to open first, my improvement also acts as an anti-scalding device for the hot water will not be turned on until the lever has traversed over half the length of the slots, and consequently has started the flow of the cold water. But, of course, if desired, the parts of the mechanism may be arranged to have the hot water flow first, or a separate lever may be employed to actuate each arm.

The many advantages incident to my invention, other than those herein enumerated, will be readily apparent to those skilled in the art and need not be recited in detail.

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

1. The combination with a valve, of a pivoted cam arm for operating the same, a pivoted rod contacting therewith, the plane of oscillation of the rod being substantially at right angles to the plane of oscillation of said arm.

2. The combination with a valve, of a pivoted cam arm for operating the same, a pivoted rod contacting therewith, the plane of oscillation of said rod being substantially at right angles to the plane of oscillation of said arm, and a downwardly inclined handle for said rod.

3. The combination with a valve, of a pivoted cam arm for operating the same, a pivoted rod extending across and contacting with the cam arm, the plane of oscillation of the rod being substantially at right angles to the plane of oscillation of the arm, and means for limiting the arc wherein such rod moves.

4. The combination with a plurality of valves, a plurality of cam arms for operating the same supported on a common pivot, and a pivoted rod contacting with said arms, the plane of oscillation of said rod being substantially at right angles to the plane of oscillation of the arms.

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

LOUIS M. HOOPER.

Witnesses:

JOHN REIDIN,

WILLIAM CURRIE.