

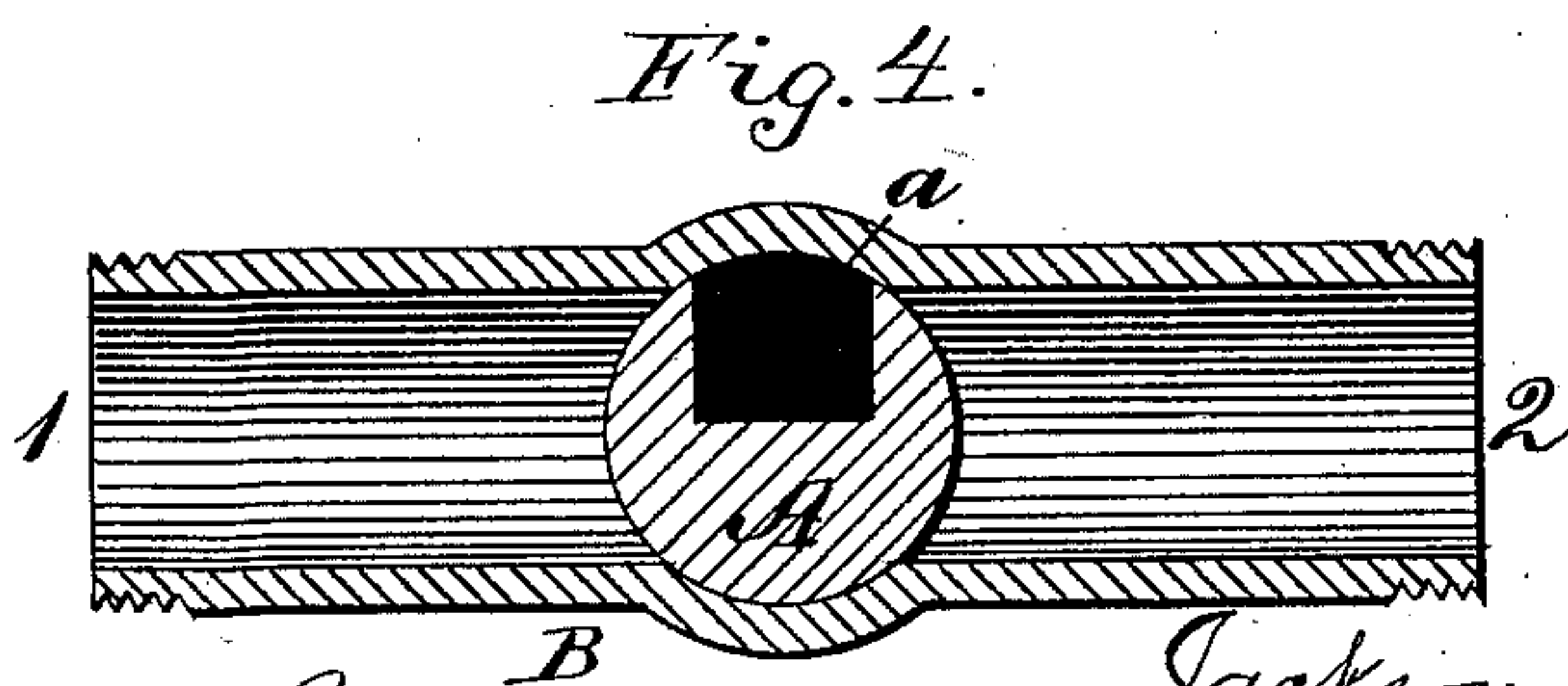
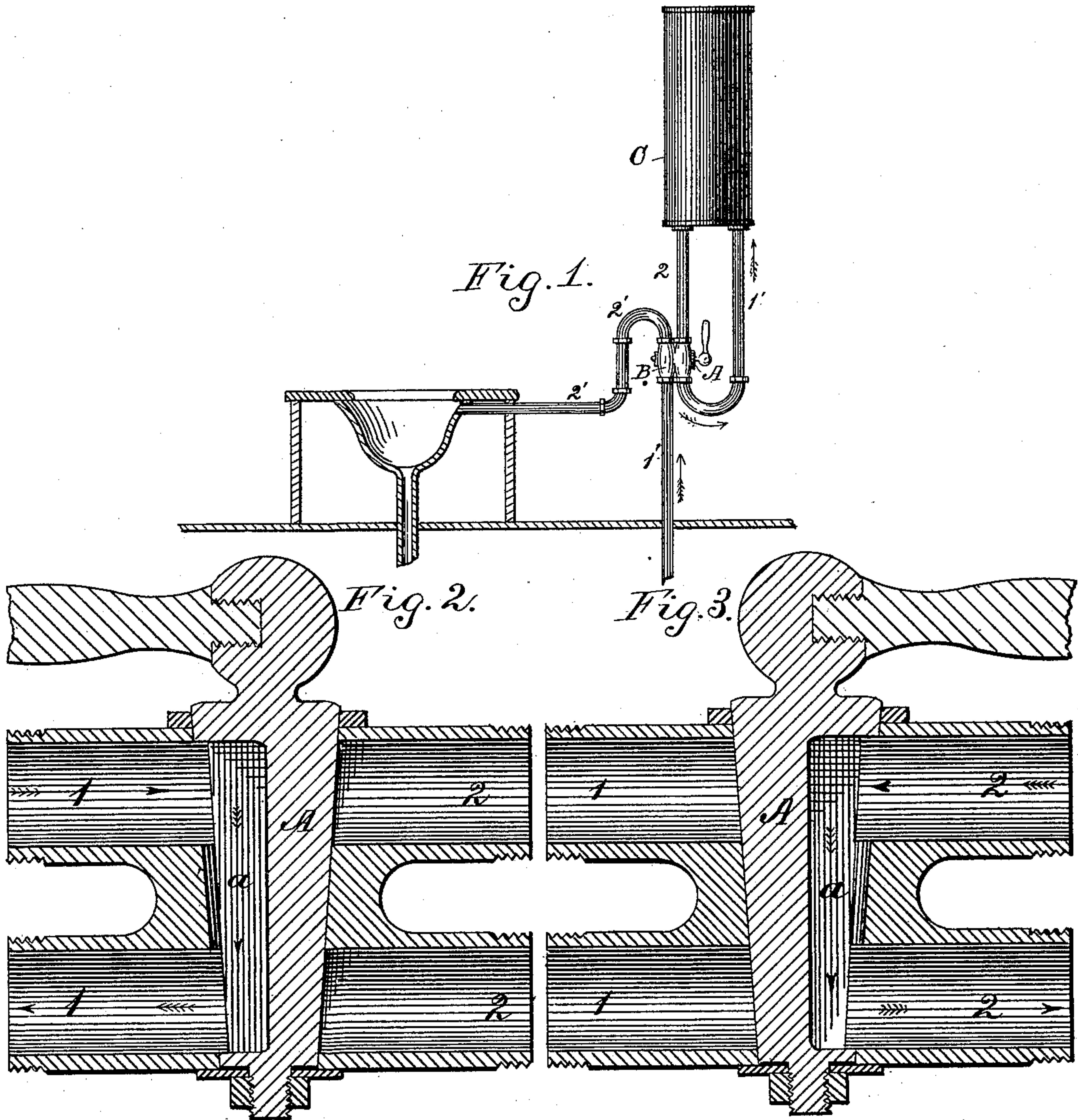
(No Model.)

J. SHEPPARD.

FOUR WAY COCK.

No. 245,880.

Patented Aug. 16, 1881.



WITNESSES:

J. W. Garner
Amos W. Hart

INVENTOR:

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UNITED STATES PATENT OFFICE.

JACKSON SHEPPARD, OF MEMPHIS, TENNESSEE.

FOUR-WAY COCK.

SPECIFICATION forming part of Letters Patent No. 245,880, dated August 16, 1881.

Application filed March 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, JACKSON SHEPPARD, of Memphis, in the county of Shelby and State of Tennessee, have invented a new and Improved Four-Way Cock; and I do hereby declare that the following is a full, clear, and exact description of the same.

The plug of an ordinary four-way cock is so constructed as to allow supply of liquid through two pipes and escape of liquid through two other pipes simultaneously, but is not adapted to cut off the flow in either direction and simultaneously allow it in the other.

My invention relates to a cock whose plug is so constructed and combined with a shell having four openings or passages that it will allow passage of liquid in either of two directions through the shell, but not in both simultaneously, and may be adjusted to cut off the flow in both directions when desired.

In carrying out my invention I construct the plug with a narrow lengthwise chamber or groove which is closed at each end, but leave the plug plain, or without chamber or groove in its opposite side. When the plug is adjusted in one position its chamber will register with and open communication between two of the openings in the shell and close the others, and vice versa, so as to open supply to and cut off discharge from a tank, or vice versa, as required. When the plug occupies an intermediate position it will cut off both supply and discharge at the same time.

In the accompanying drawings, forming part of this specification, Figure 1 is a sectional view, showing the practical application of my invention in connection with a water-tank and water-closet basin. Figs. 2 and 3 are central longitudinal sections of the four-way cock, showing two positions of the plug. Fig. 4 is a horizontal or transverse longitudinal section of the four-way cock, showing the third position of the plug.

The letter A indicates the plug or valve, having a slot, *a*, that extends about two-thirds the length of its tapered body. The plug fits accurately in a shell, B, having four openings, 1 1 and 2 2, that communicate with the central bore filled by the plug. Two of these openings, 1 1, are on one side of the shell, and two of them, 2 2, on the other side. The sec-

tions 1' 1' of a supply-pipe for a tank or other liquid-receptacle, C, are attached to the shell, so as to communicate with the respective openings 1 1, and the sections 2' 2' of the discharge-pipe of said tank C are similarly connected with the other openings, 2 2. If, now, the plug A be adjusted as shown in Fig. 2—that is to say, with its chamber *a* facing the openings 1 1 of the shell B—it is apparent said chamber will form a communicating passage between said openings, and thereby make the supply-pipe sections 1' 1' a practically continuous passage, so that the liquid may flow into the tank C, as indicated by arrows, Fig. 1. If, on the other hand, the plug be turned a quarter round, it will close such passage, shut off supply to the tank, and open communication between the discharge-openings 2 2 and corresponding sections 2' 2' of the discharge-pipe, as illustrated in Fig. 3. In the third place, if the plug be adjusted midway between the two positions just indicated, so that its recess *a* is opposite the side of the shell B, as in Fig. 4, both supply and discharge will be cut off. Thus the four-way cock is adapted to simultaneously open and close the discharge-pipes, or close the supply and open the discharge pipes, or to close both, as may be required, and will effectually prevent waste. It is particularly useful in connection with various kinds of liquid-storage tanks—such, for example, as the tank of a water-closet.

I am aware that a plug or tapered valve has been provided with a central slot, and also a lengthwise slot, in each of two opposite sides; but such construction I do not claim.

What I claim as new is—

In combination with the shell B, having two openings on each of two opposite sides for attachment of four pipes, as specified, the plug A, having one side plain and the other provided with a vertical slot which is of such length as to traverse two of said openings and establish communication between them, while closing the opposite openings, as shown and described, for the purpose specified.

JACKSON SHEPPARD.

Witnesses:

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W. S. CAMERON.