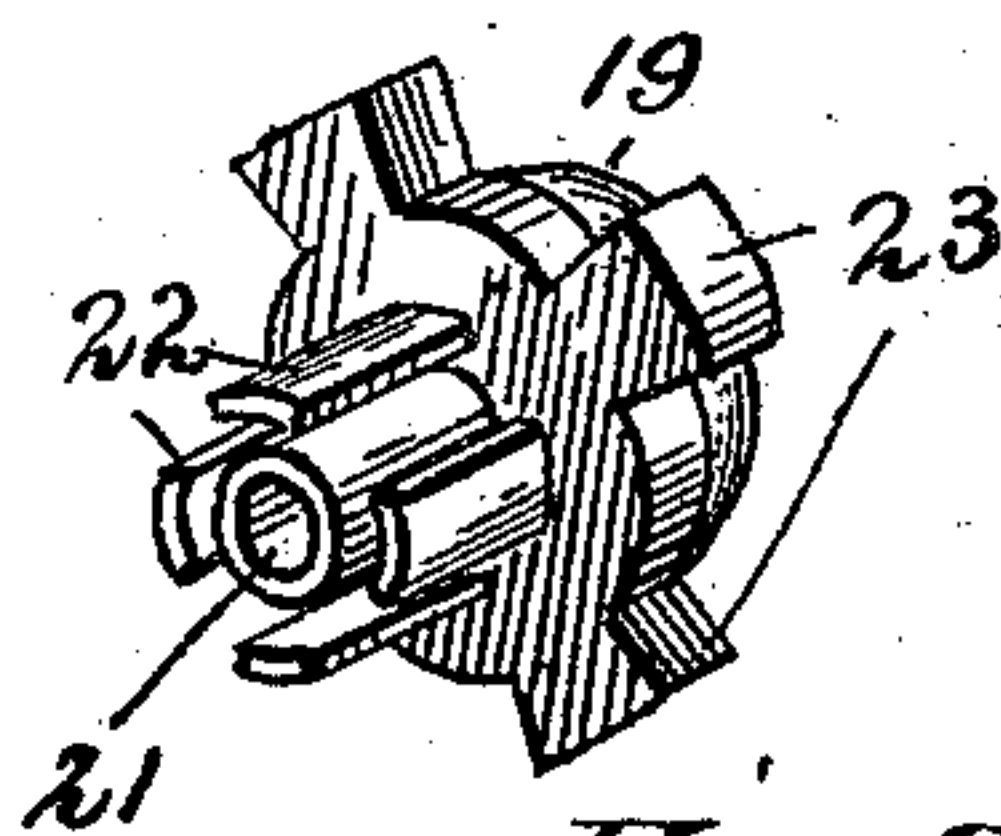
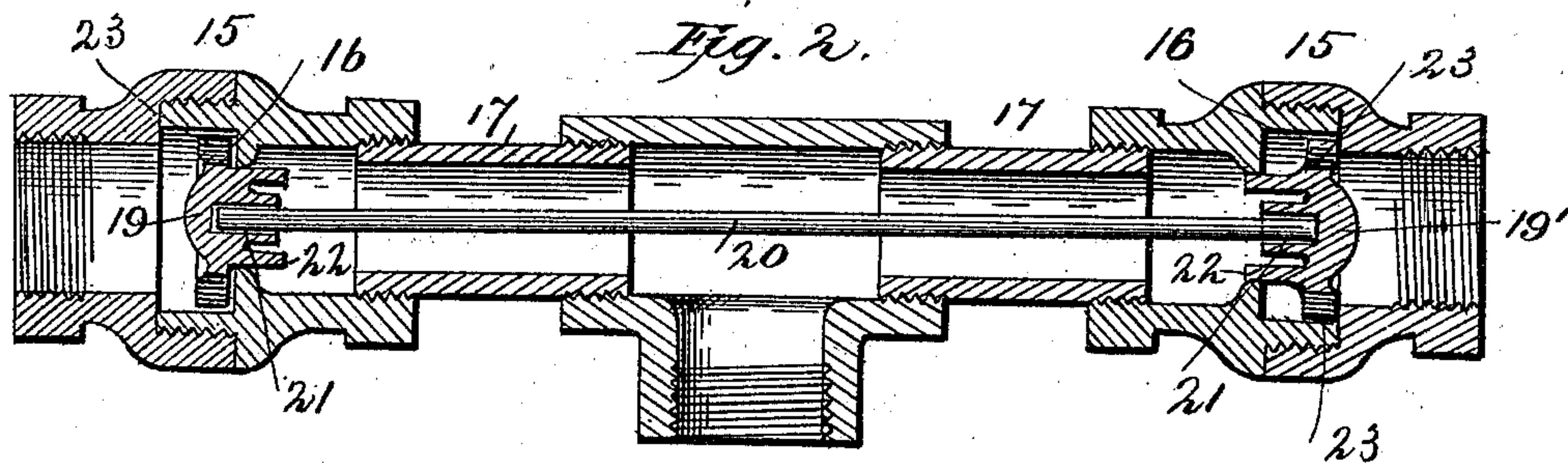
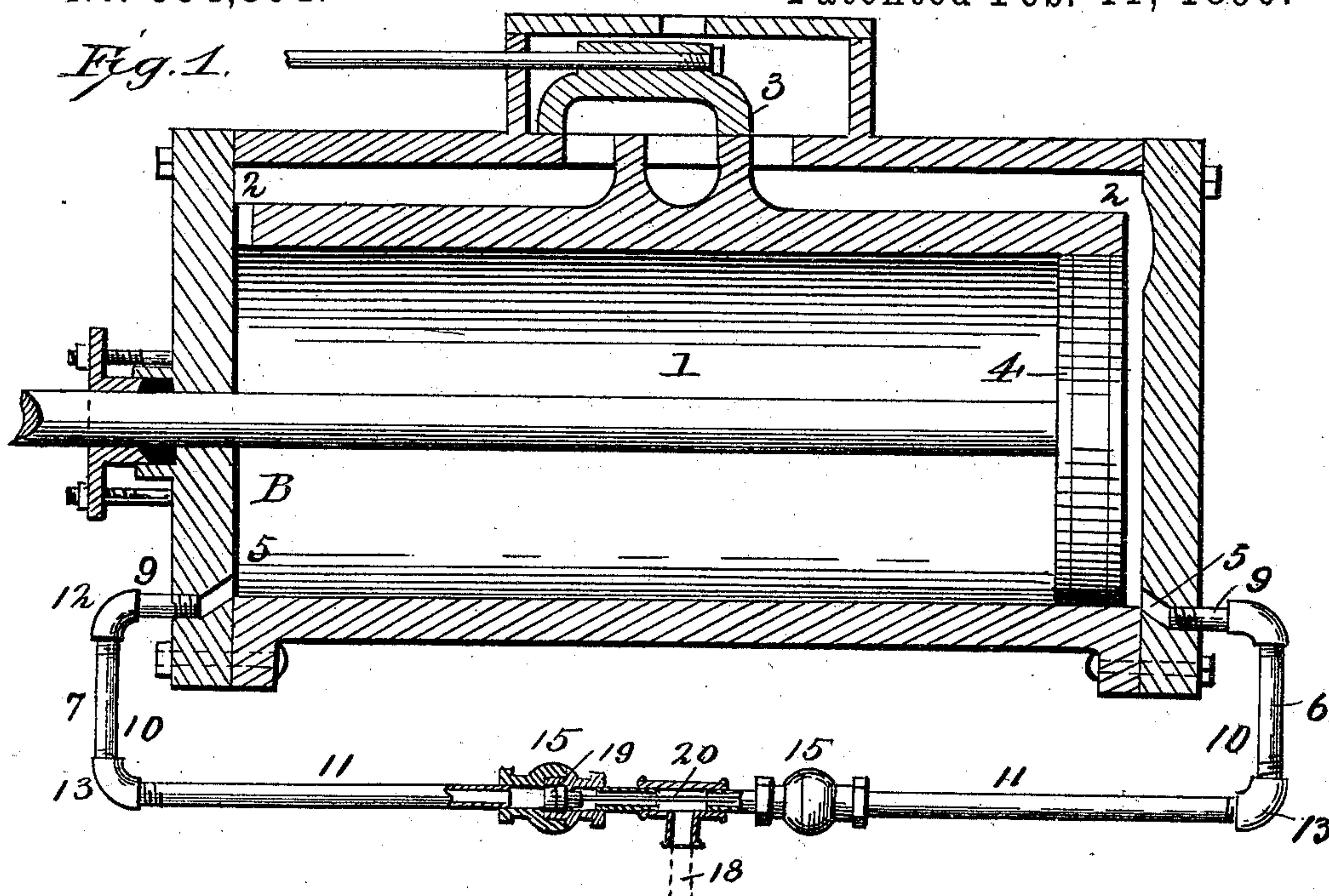


(No Model.)

J. C. GETTY.
CYLINDER VALVE FOR STEAM ENGINES.

No. 554,364.

Patented Feb. 11, 1896.



WITNESSES
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UNITED STATES PATENT OFFICE.

JAMES C. GETTY, OF INDIANA, PENNSYLVANIA.

CYLINDER-VALVE FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 554,364, dated February 11, 1896.

Application filed May 9, 1895. Serial No. 548,756. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. GETTY, a citizen of the United States, residing at Indiana, in the county of Indiana and State of Pennsylvania, have invented certain new and useful Improvements in Cylinder-Valves for Steam-Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to valves for steam-engine cylinders.

The object of my invention is to provide simple and inexpensive means by which engine-cylinders may be kept free from water or condensed steam while at work without requiring the attention of the engineer.

With this object in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, in which like numerals of reference denote corresponding parts in the several views, Figure 1 is a longitudinal vertical sectional view of a steam-cylinder with my invention thereto applied. Fig. 2 is a similar view, on an enlarged scale, of my invention, showing the exhaust-valves in a position opposite to that shown in Fig. 1. Fig. 3 is a detail perspective view of one of the valves removed from its casing.

1 denotes a steam-cylinder; 2, the inlet-ports; 3, the slide-valve for controlling the admission of steam to the cylinder; 4, the piston, and 5 the exhaust-ports at the ends of the cylinder. These parts may be of any well-known or improved construction, and, as they form no part of my invention, a detail description of them is not deemed necessary.

Pipes 6 and 7 are connected to the cylinder and communicate with the interior thereof through the exhaust-ports 5. Each of these pipes may be made in a single piece and then bent downward and under the cylinder, or, as shown in the accompanying drawings, each pipe may consist of sections 9, 10 and 11, connected by elbows 12 and 13. Valve-casings 15 are secured to the inner ends of the sections 11 and are provided with valve-seats 16. Pipes 17 are connected to the inner ends of the valve-casings and in turn are connected with a T-joint which is provided with an outlet-pipe 18.

Check-valves 19 and 19' are arranged within the valve-casings 15. A rod 20 extends from valve to valve and has its ends fitting into sockets 21 formed in the inner faces of the valves.

In operation, when steam is admitted at the end A of the cylinder, the check-valve 19 will be forced against its seat and be closed by the live steam entering that end of the cylinder, and the movement of this valve will be imparted to the valve 19' by the rod 20, and the valve 19' will be moved from its seat and be opened, thus allowing the water at the end B of the cylinder to escape. On the return stroke of the piston the valve 19' will be closed and the valve 19 will be opened, so as to allow the water to escape from the end B of the cylinder.

In the present instance I have shown the ends of the rod 20 as being loosely connected to the check-valves. This enables the parts to be fitted and insures their working whether the pipes, valves, and valve-casings are true or not. I have also shown the valves as being provided with laterally-projecting guide-arms 22 and with supporting-lugs 23. It is evident, however, that the rod may be fixedly secured to the valves, and they may be of any of the well-known or improved constructions without departing from the spirit of my invention.

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

The combination with an engine-cylinder, of pipes connected at the ends thereof, valve-casings secured to the free ends of said pipes, short pipes secured to the inner ends of the valve-casings, a T-joint connecting the inner ends of the short pipe-valves located in said valve-casings and having a notched periphery adapted to abut against the valve-seats in said casings and close the exit through the valves, said valves being provided with sockets and with laterally-projecting arms to slide on the valve-seats, and a rod engaged in said sockets and connecting the valves so that the valves will be actuated in unison, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES C. GETTY.

Witnesses:

D. W. SIMPSON,
JOHN G. CAMERON.