

W. S. ELLIOTT.  
TWIN STRAINER.  
APPLICATION FILED OCT. 12, 1907.

962,202.

Patented June 21, 1910.

Fig. 1.

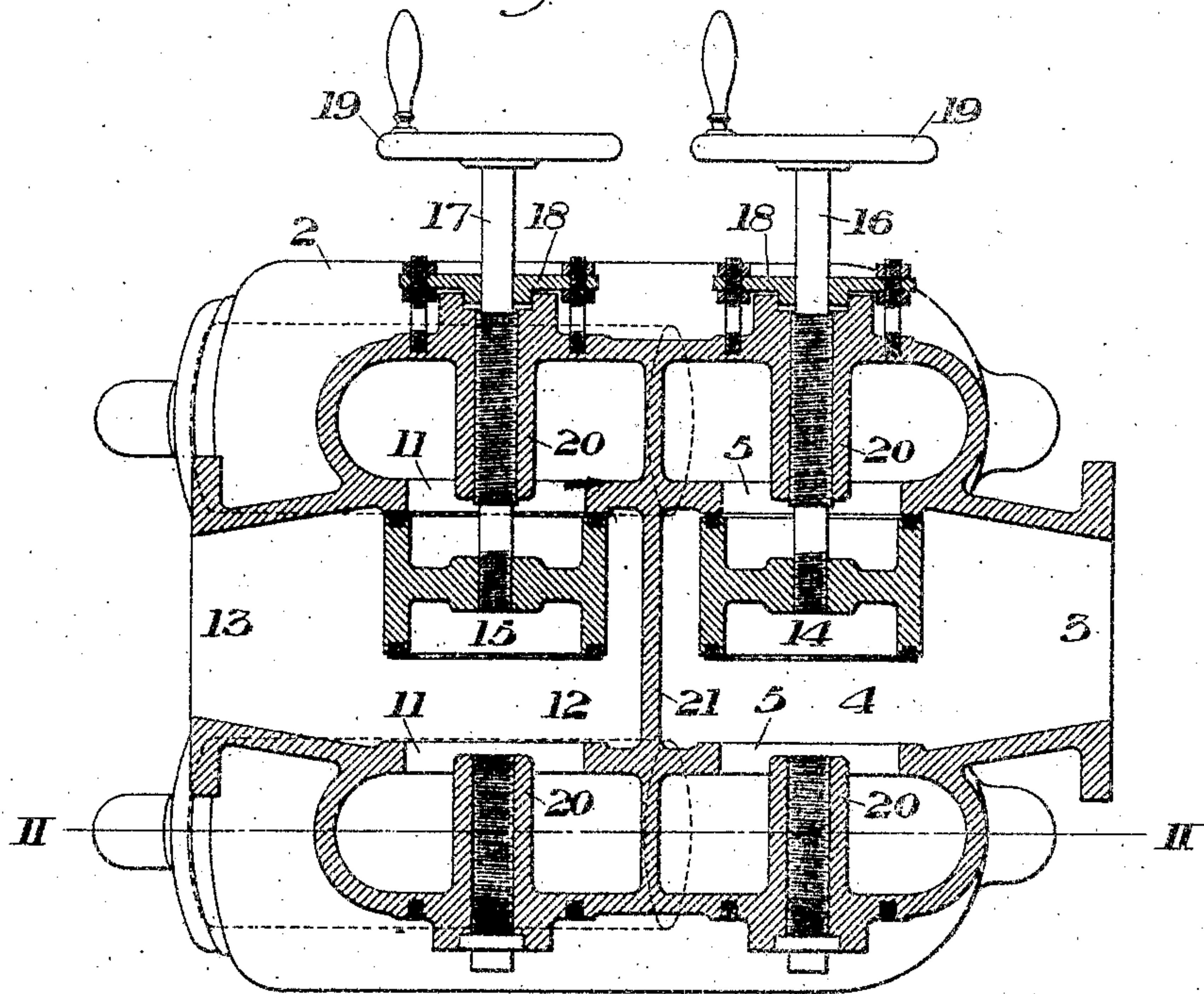
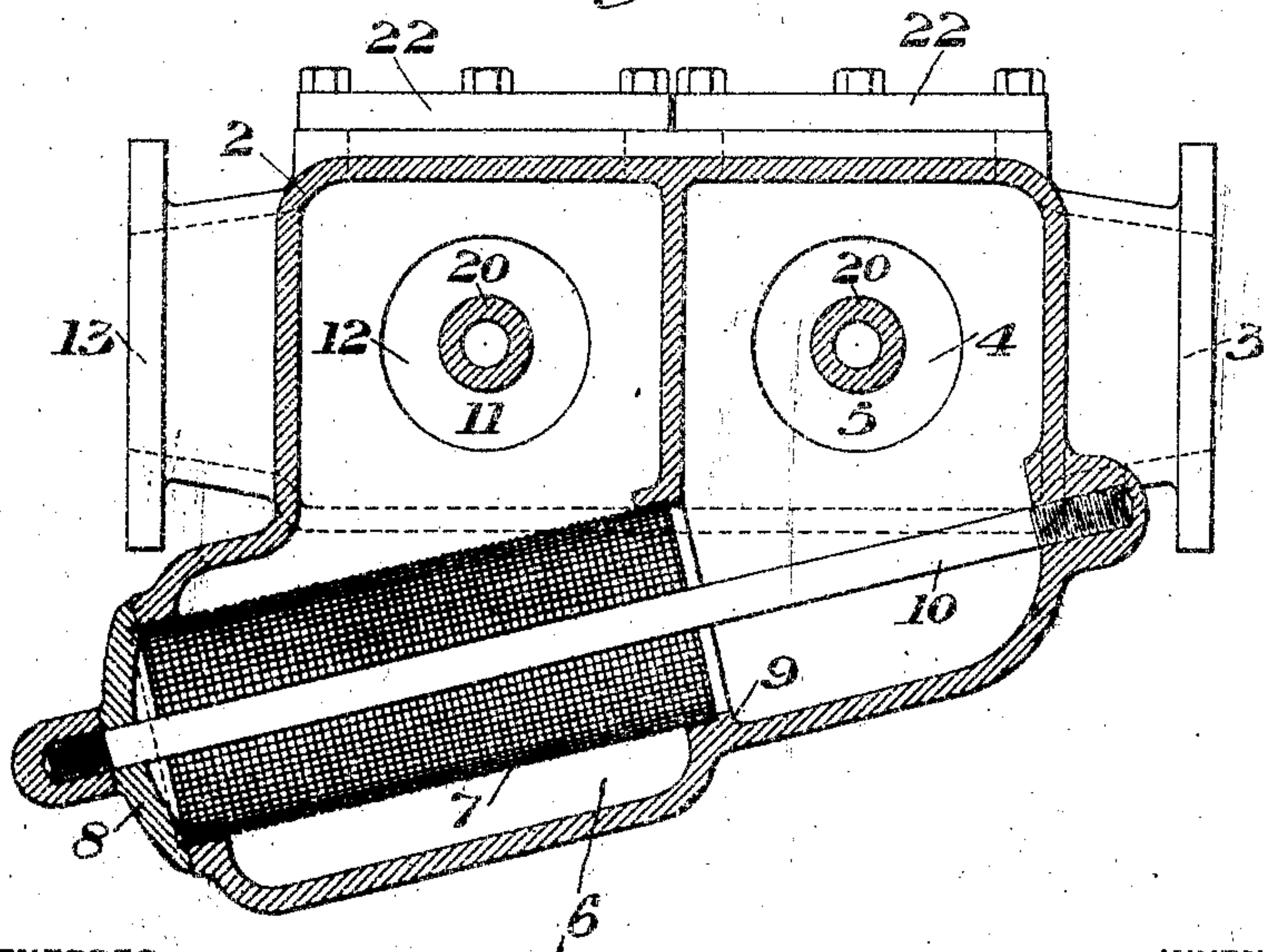


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## TWIN STRAINER.

962,202.

Specification of Letters Patent. Patented June 21, 1910.

Application filed October 12, 1907. Serial No. 397,132.

*To all whom it may concern:*

Be it known that I, WILLIAM S. ELLIOTT, of Pittsburg, Allegheny county, and State of Pennsylvania, have invented a new and useful Twin Strainer, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to the straining of water or other liquid, and it is designed to provide a simple, efficient and easily cleaned multiple strainer system by which the liquid may be shunted sidewise into either one of two or more strainers. The arrangement is such that either strainer system may be shut off and the water directed to the other system, so that the strainers may be alternately cleaned.

Figure 1 is a central longitudinal section showing one form of my improved strainer device; Fig. 2 is a cross section on the line II—II of Fig. 1.

In the drawing, referring to the form of Figs. 1 and 2, 2 represents the general body of the twin strainer, which is preferably formed of a casting, either in one or more parts. 3 is the nozzle or port through which the water enters longitudinally. This water flows into a valve chamber 4, having side ports 5, 5 on different sides, opening into lateral chambers 6, 6, each of which contains a strainer 7. In the form shown in these figures, the strainer chambers extend at an angle to the longitudinal axis of the general casting, and the strainer, which is of tubular form, is slipped in from one end, its outer end being covered by a screw cap 8, which clamps it in place against an inner annular shoulder 9. The screw cap 8, in the form shown, engages a through bolt or rod 10, whose other end is secured at the opposite end of the chamber containing the strainer. The tubular strainers shown are smaller in diameter than the chambers receiving them, and from the lower part of these strainer chambers, port 11 leads into a second valve chamber 12, from which the water passes out through nozzle or port 13. In the valve chambers 4 and 12 are located valves 14 and 15, which are adapted to close either of the sets of ports 5 and 11. These valves, in the form shown, are moved endwise by means of screw stems 16 and 17, extending through suitable stuffing boxes 18, and having any suitable actuating handles, such as hand-wheels 19. These screw-threaded stems extend through suitable

screw-threaded guides 20, which may be cast integrally with the main casting or attached thereto, and to provide for operating the valves either right or left-handed, I preferably form two sets of the screw-threaded guides 20, extending from opposite sides. In this way, the valve-controlled handles and stems can be easily shifted according to the position in which the strainer is placed. 21 is a separating web or partition, which is between the valve chambers. This partition may be formed separately and secured in place, and serves to compel the water to flow in either direction through the strainers.

In order to provide for easy removal and replacing of the valves, as well as to obtain easy access thereto after the strainer is in place, I preferably form the general casting with an opening on one face, to which opening or openings are secured cover plates 22, which may be held by cap bolts or any other desirable means. By removing these plates, the valves may be taken out, or access had to them without detaching the apparatus from its connections.

In the use of the strainer the two valves are moved against one set of seats, and the water then flows through one of the strainers and out through the outlet 13. When it is desired to clean the strainer which has been used, the valves are moved over to their opposite seats, and the water is thus shunted through the other strainer, allowing the first strainer to be removed and cleaned or replaced.

The advantages of my invention result from the simplicity, strength and efficiency of the construction and from the manner in which the water may be easily shunted from one strainer to the other in case of repair or cleaning. Easy access is also given to the valves without disconnection.

The strainer chambers may be arranged parallel to each other and to the main casting of the apparatus, or may be arranged at any angle desired to meet local conditions or facilitate cleaning. The strainer may be made of tubular form or otherwise and may be held in any convenient manner. The valves may be of different types, and other changes may be made without departing from my invention.

I claim:

In a twin strainer, a casing divided internally into two valve chambers at opposite sides of a division wall, and a strainer



chamber at each side of the valve chambers, one of the valve chambers having an entrance opening, and the other an outlet opening, and each chamber having alined  
5 ports communicating with the respective strainer chambers, and a double valve in each chamber, each valve being arranged to alternately close the port leading to one strainer chamber and close the port leading to the

other strainer chamber, substantially as described.

In testimony whereof, I have hereunto set my hand.

WILLIAM S. ELLIOTT.

Witnesses:

C. P. BYRNES,  
H. M. CORWIN.