

No. 837,713.

PATENTED DEC. 4, 1906.

J. O'NEILL.  
FITTING FOR WATER HEATING SYSTEMS.

APPLICATION FILED OCT. 12, 1906.

Fig. 1.

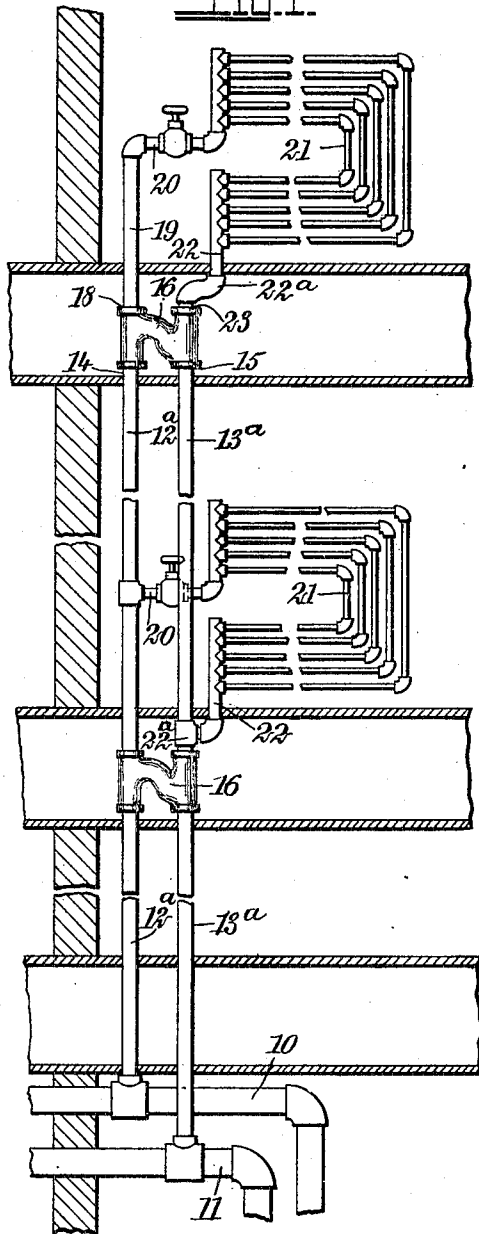
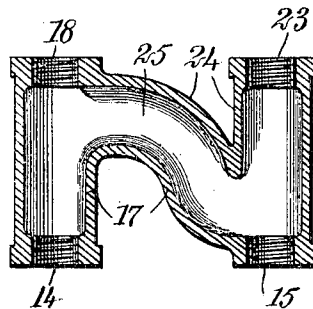


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## FITTING FOR WATER-HEATING SYSTEMS.

No. 837,713.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed October 12, 1905. Serial No. 232,528.

*To all whom it may concern:*

Be it known that I, JOHN O'NEILL, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Fitting for Water-Heating Systems, of which the following is a full, clear, and exact description.

My present invention relates to an improvement over the heating system set forth in my application for a patent on heating system, Serial No. 254,236, filed April 6, 1905. In my above-mentioned application I described a fitting in which the hot water from the radiator on its return entered at one side at right angles to the general course of the water.

My present invention relates to a fitting in which the return from the radiator enters in a line parallel with the general course of the water through the system. In order to accomplish this result, certain improvements and modifications have been made.

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 both the figures.

Figure 1 is a side elevation of a portion of a heating system embodying my invention, and Fig. 2 is a central vertical section of one of the fittings which constitutes the main part of this invention.

In this system flow and return pipes 10 and 11, respectively, leading from the heater, are connected with a main flow-pipe 12<sup>a</sup> and a main return-pipe 13<sup>a</sup>, respectively. The latter pipes extend through the building, passing at each floor into respective openings 14 and 15 of a fitting 16, which may be situated between the ceiling and floor of the structure in which the system is installed. These openings are shown as being divided by a double wall 17, extending vertically upward from the opening 14, but communicating with the opening 15 in an inclined direction. At the opposite side and in alinement with the opening 14 is a preferably reduced opening 18, in which in the lower members of the system the pipe 12<sup>a</sup> continues and from which in the top member a flow-pipe 19 leads to a radiator system. This flow-pipe

and the main flow-pipes 12<sup>a</sup> are connected by branches 20 with radiators 21. From each of these radiators a return-pipe 22 connects with a fitting 22<sup>a</sup>, connected with the main return-pipe 13<sup>a</sup>, and through that with the fitting 16.

The entrance to the fitting 16 is through an opening 23. This opening is located directly above the opening 15, so that a direct flow of water can take place through it without any obstruction. A double wall 24 is located between this opening and the wall 17, and the inner portion of this wall is inclined in such a manner as to provide a by-pass 25 in the fitting. This by-pass is curved or inclined from the opening 18 to the opening 15 and affords means whereby when any one of the branches 20 is closed the water instead of remaining stagnant will flow through the by-pass from the opening 18 or from the opening 14 into the return-pipe 13<sup>a</sup> through the opening 15. In order to accomplish this result efficiently, the top of the wall 17 is located at a considerable distance above the opening 15. This provides a downwardly-extending by-pass, which will direct the water in the way intended.

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

1. A fitting for water-heating systems comprising a body having two openings situated on one side at a distance from each other, and two openings situated on the other side opposite the first two openings, the fitting being provided with a passage leading directly from each opening to the opening opposite it in the other side, and with a by-pass extending from a point adjacent to one of the openings in the second side to the opening diagonally opposite, said by-pass being inclined from the former opening to the latter.

2. A fitting for water-heating systems comprising a body having two openings situated on one side at a distance from each other, and two openings situated on the other side opposite the first two openings, the fitting being provided with a passage leading directly from each opening to the opening opposite it in the other side, and with a by-pass extending from a point adjacent to one of the openings in the second side to the opening

diagonally opposite, said by-pass being inclined from the former opening to the latter; the other two openings of the fitting each being provided with a vertical wall extending  
5 toward the interior of the fitting and adapted to force the water entering those openings toward the opposite opening.

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

JOHN O'NEILL.

Witnesses:

BARNEY M. CULLION,  
CHAS. F. O'NEIL.