

No. 765,651.

PATENTED JULY 19, 1904.

P. DEASY.
WATER HEATING APPARATUS.
APPLICATION FILED AUG. 25, 1902.

NO MODEL.

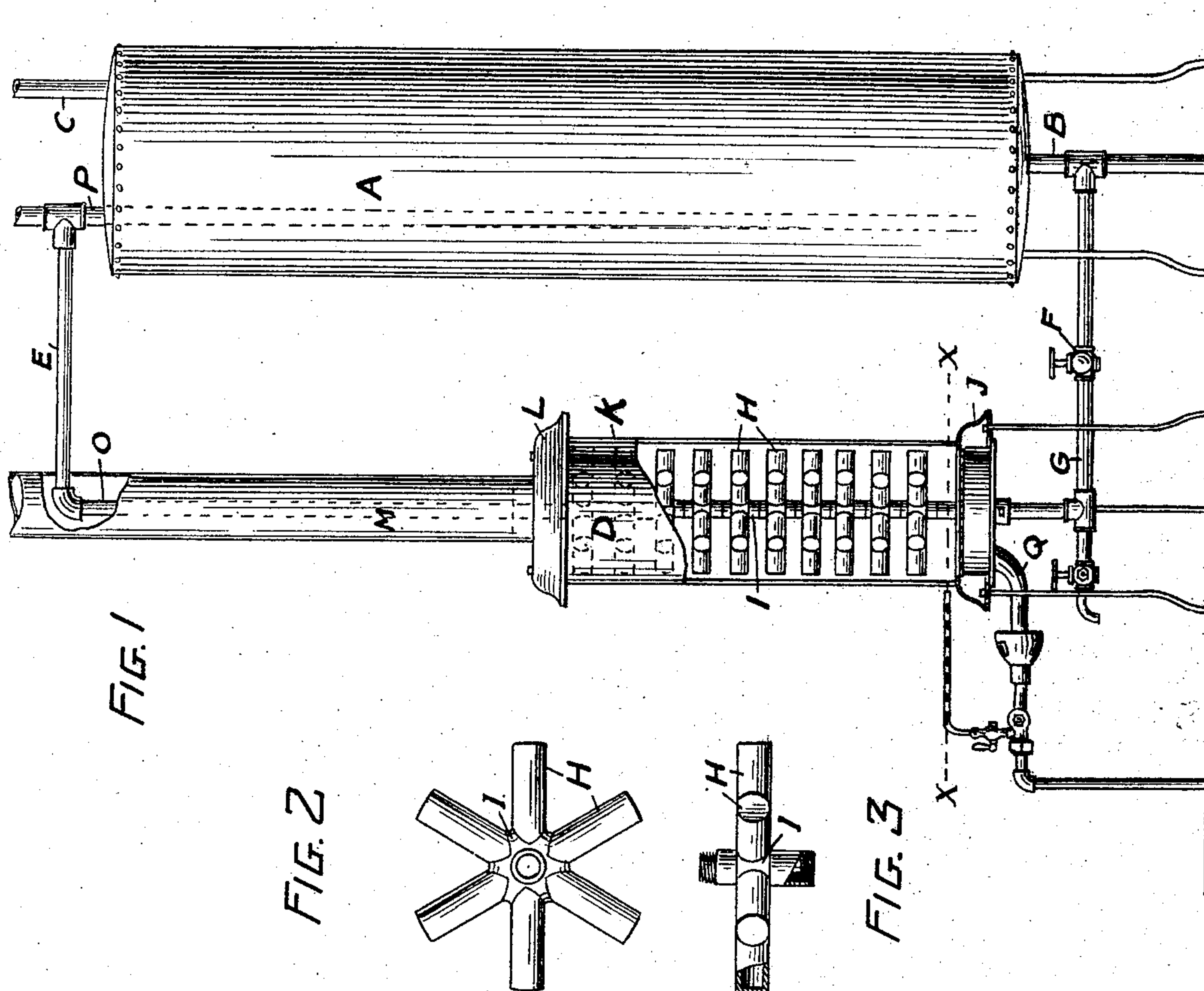


FIG. 1

FIG. 2

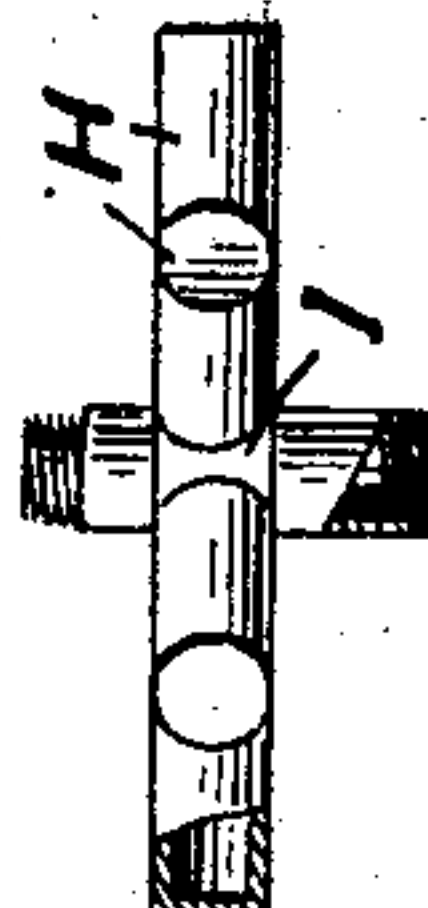
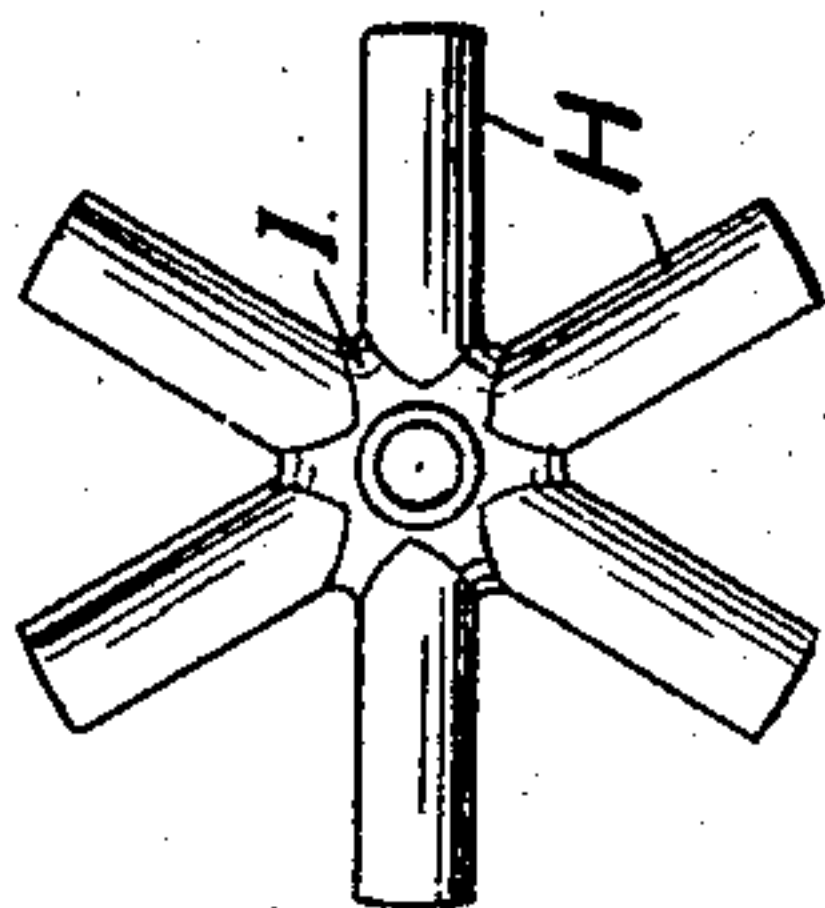
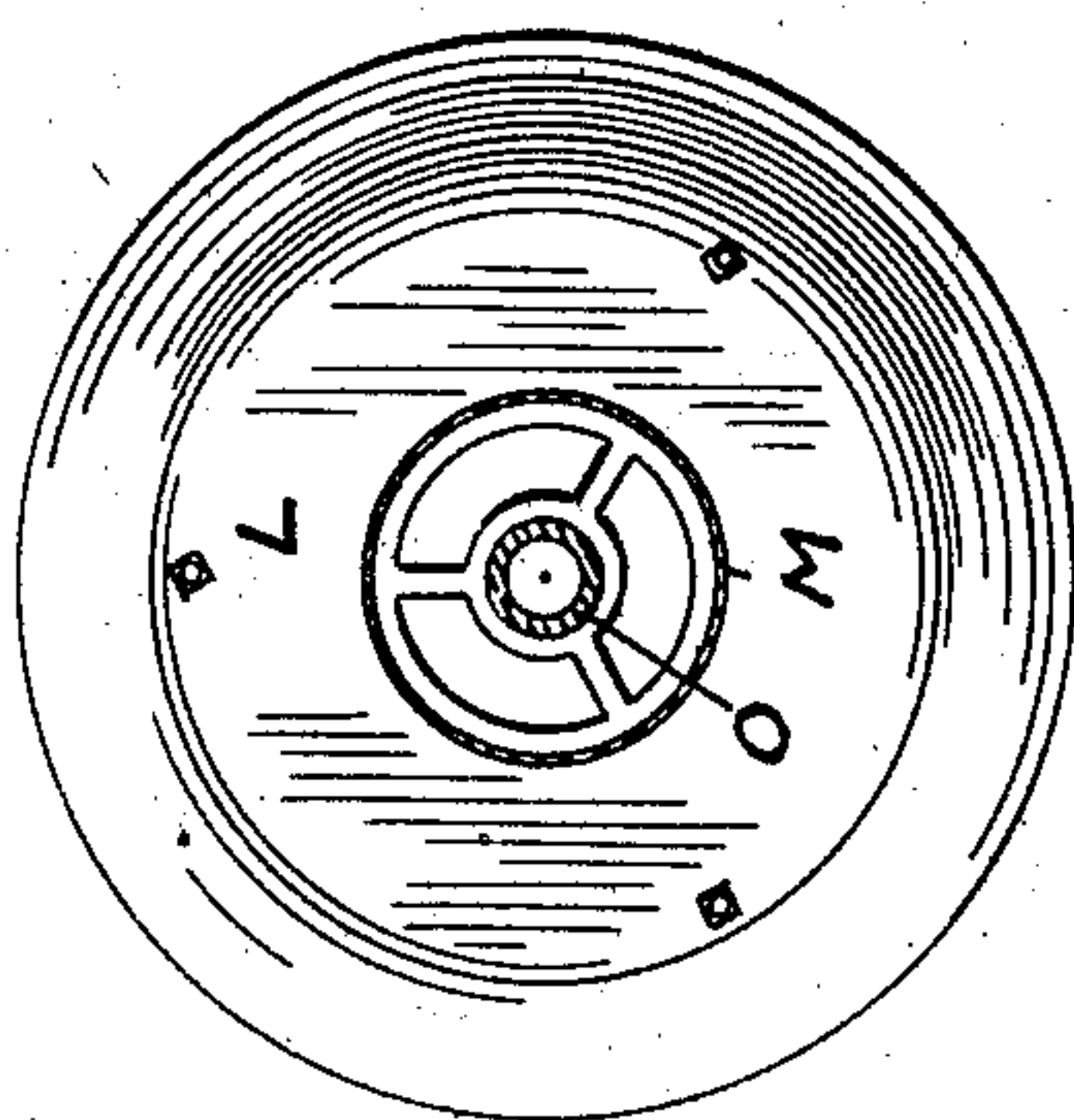
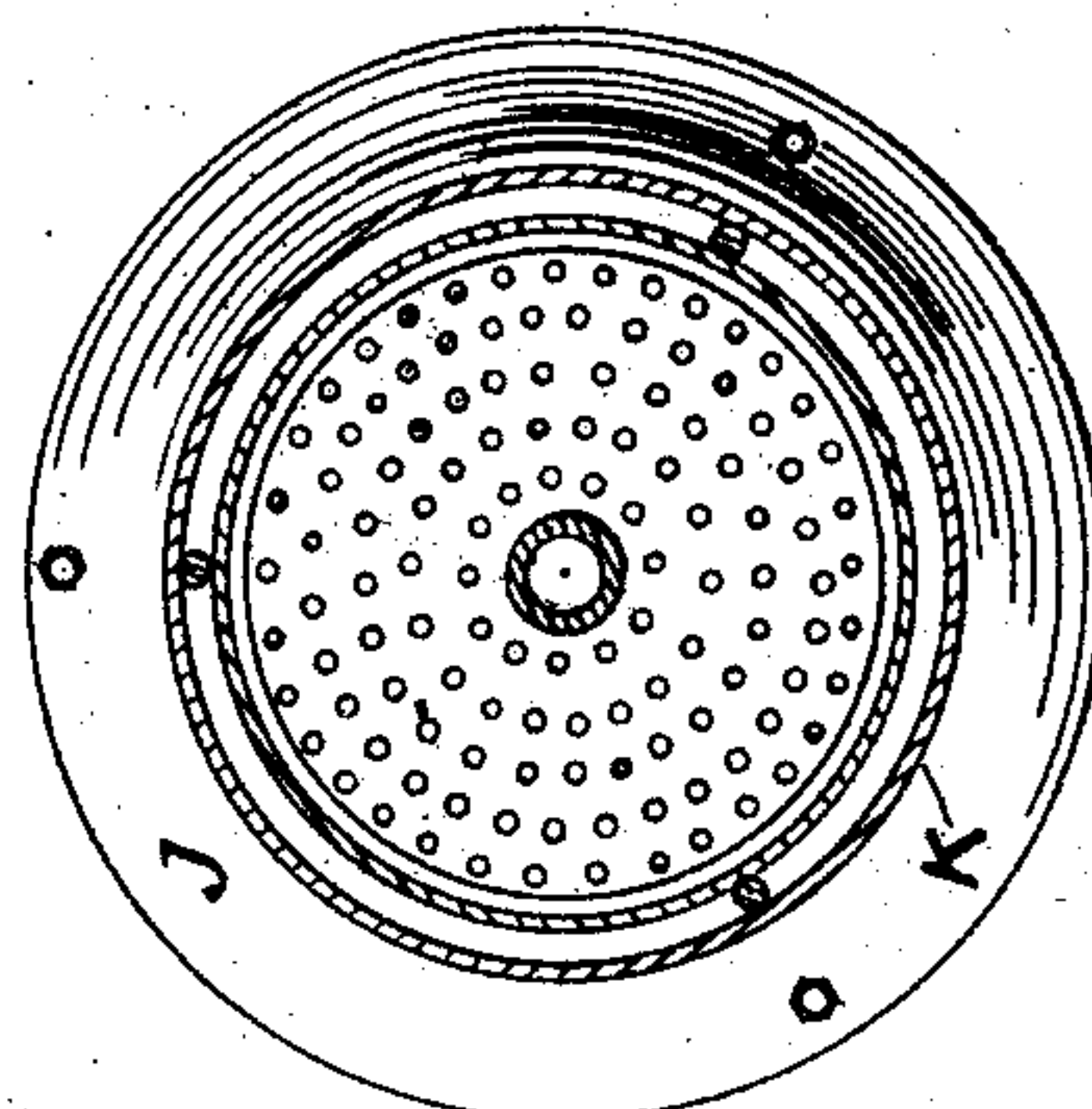


FIG. 3

FIG. 4



FILE 5



WITNESSES:

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UNITED STATES PATENT OFFICE.

PETER DEASY, OF OAKLAND, CALIFORNIA, ASSIGNOR TO THE DEASY WATER HEATER COMPANY, OF OAKLAND, CALIFORNIA, A CORPORATION OF CALIFORNIA.

WATER-HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 765,651, dated July 19, 1904.

Application filed August 25, 1902. Serial No. 120,994. (No model.)

To all whom it may concern:

Be it known that I, PETER DEASY, a citizen of the United States, residing in the city of Oakland, county of Alameda, State of California, have invented certain new and useful Improvements in Water-Heating Apparatus; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention relates to a novel arrangement of a supplemental gas-heater in connection with a common house-boiler for supplying hot water to a house by which the water-back of a stove is supplemented in heating the water.

Referring to the accompanying drawings, Figure 1 is a side elevation of an ordinary hot-water boiler and a water-heater so connected together as to heat the water in the boiler, showing a portion of the water-heater broken away to show its interior. Fig. 2 is a plan view of one of the sections of the water-heater. Fig. 3 is a side view of one of the heater-sections. Fig. 4 is a plan view of the top plate of the heater, and Fig. 5 is a plan view of the base of the heater.

At one side of the boiler A and in juxtaposition to it I mount an independent heater on a separate stand. The heater consists of a gas-burner J, mounted at about the height of the bottom of the boiler and above which are mounted a series of hollow-armed castings H inside an inclosing casing D. The top of the casing has a flue M extending upward above it and which may be connected at its upper end with a chimney or the flue-pipe of a stove. The bottom of the boiler is connected by the pipes G and B with an upraise-pipe O, which passes upward through the series of hollow radiating arms. The same pipe B may also be extended to or connected with the water-back (not shown) of a cook-stove. The pipe O rises upward inside the flue M to a point just above the top of the boiler, where it is bent at right angles and passes out through the side of the flue and is connected with the

top of the boiler, as shown. By this arrangement the water in the pipe O receives the benefit of the heat in the flue during its passage through the flue. A cock F in the length of the pipe G serves to shut off the water-supply from the boiler and stop the circulation through the gas-heater.

The water-heater D consists of a number of hollow castings in the form of short spokes or arms H, radiating from a center I, which are also hollow. The center or hub is a short pipe from which the hollow spokes radiate, and it has male threads on one end and female threads on the opposite end, so that a number of these castings can be screwed together, and thus form a longitudinal series of hollow castings with radiating arms, all of which connect with the center pipe, so that when water is introduced into the center pipe it will also fill all the radiating hollow arms. This series of castings when thus connected together are connected at the lower end with the pipe G through a base-plate J, (shown at Fig. 5,) and a cylindrical shell K rests upon this base and forms a casing which extends to the top of the series and surrounds and incloses them.

A top plate L (shown at Fig. 4) rests upon the upper end of the shell or casing and is connected with the bottom plate J by three or more bolt-rods and nuts.

A flue-pipe M rises from the top plate L and is preferably connected at its upper end with a chimney or flue, so as to carry away the products of combustion from inside the casing, although this latter connection may be dispensed with.

The upper end of the pipe center I of the top casting is connected with a pipe O, which rises within the flue-pipe M to a point just above the top of the boiler A, where it bends outward and passes through the flue and is connected with a pipe P, which extends down into the boiler to near its bottom, thus establishing a circuit for circulating the water in the boiler through the heater.

Q is a gas-pipe which connects with a source of gas-supply and supplies gas for heating purposes through the bottom plate J inside the

shell K at the lower end of the series of castings, which when lighted furnishes a heat for heating the several castings and the water contained within them, so that the water contained in them is caused to circulate from and into the boiler, which quickly heats the water in the boiler.

This arrangement will be highly useful in hotels and other places where it is desirable to heat and maintain a larger quantity of hot water for bath and other purposes than the ordinary furnace and water-back can supply, or the water-heater can be used alone without lighting the fire in the stove-furnace, or, on the other hand, the water can be cut off from the supplemental heater by closing the cock F, and thereby allow the stove-furnace and water-back to supply the heat in the ordinary way.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

In combination with a stand-boiler, a supplemental water-heater consisting of a series of straight hollow arms radiating from a central water-pipe and surrounded with a shell or case, a flue-pipe connecting the top of said shell or case with the outside air, the bottom of said central water-pipe connected by a pipe with a water-supply while its top is connected with the boiler by a pipe which rises inside the flue-pipe to a point opposite its connection with the boiler, substantially as described.

In witness whereof I have hereunto signed my name.

PETER DEASY.

In presence of—

EDWIN W. WOODWARD,
JEROME DEASY.