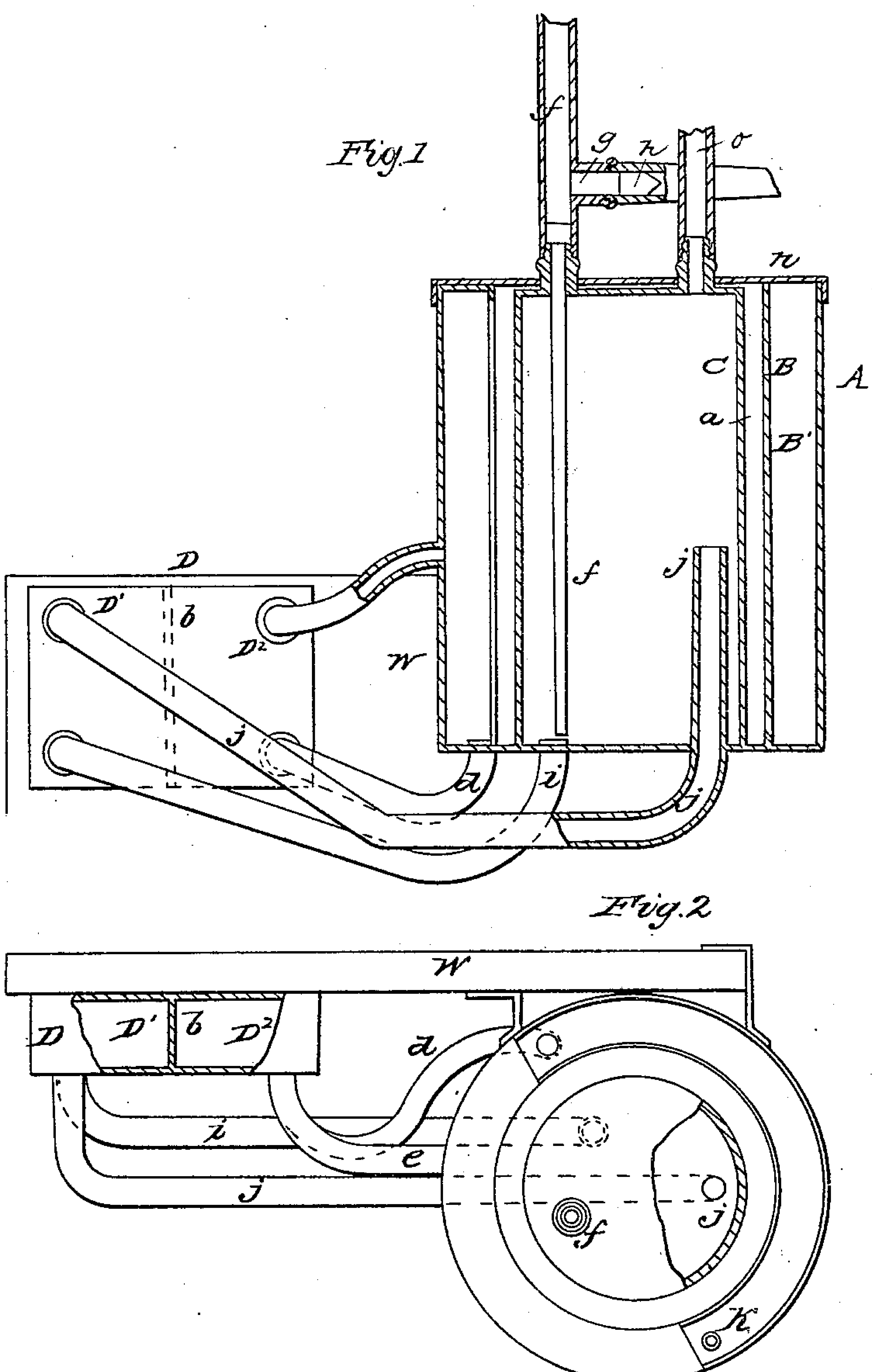
J. McCLOSKY.

Water Heating Apparatus.

No. 50,422.

Patented Oct. 10, 1865.



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UNITED STATES PATENT OFFICE.

JOHN McCLOSKEY, OF NEW YORK, N. Y., ASSIGNOR TO HENRY McGUCKIN, OF SAME PLACE.

WATER-HEATING APPARATUS.

Specification forming part of Letters Patent No. **50,422**, dated October 10, 1865.

To all whom it may concern:

Be it known that I, JOHN MCCLOSKEY, of the city, county, and State of New York, have invented a new and useful Improvement in Water-Heating Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation, partly in section, of an apparatus made according to my invention. Fig. 2 is a plan thereof, the cover of the tanks being removed.

Similar letters of reference indicate like parts.

This invention consists in an arrangement of water-heating apparatus for ranges and stoves whereby the water for use in the kitchen and lower stories of a house is heated in and supplied from a boiler or heater independent of that in which water is heated for the higher stories.

W designates a wall against which the apparatus may be set.

A is an outer cylinder, having a cover, *n*.

B is an inner cylinder, of equal height with the outer cylinder and concentric with it. The two cylinders inclose an annular water-space, B′, which is supplied with water from any suitable source through a pipe passing down through its cover, *n*, nearly to the bottom of the space B′, the space whereof is seen at *k*, Fig. 2, in dotted outlines; but the pipe is not seen in Fig. 1, because it is not embraced in the section there given. The said pipe is extended downward, however, in the same manner as the pipe *f* of the inmost cylinder, C.

d is a pipe entering the annular space B′ from below, and connecting it with the lower part of division D^2 of the water-back D.

e is a pipe which leaves the upper part of the division D^2 and enters the water-space B′ at any suitable point not far from the middle of its height.

C is a central cylinder, also concentric with the cylinder A, and which is separated from the cylinder B by an air-space, *a*, in which the air is confined, so that heat will not be communicated by convection from the contents of the annular space B′ to the contents of the cylinder C.

f is a pipe leading into the cylinder C, and passing down therein to a point near its bottom. This pipe is intended to connect with an upper reservoir in the upper part of the house in which the apparatus is set up. The pipe *f* is also connected by a branch with a hydrant-main or other water-supply pipe, and said branch is conical, and is furnished with a conical valve, *h*, which, when water is flowing from a reservoir above through the pipe *f*, will be closed against the pressure of water in the pipe *g*, because of the greater surface exposed to pressure on the back of the valve than on its face; but when no water is descending the pipe *f* from above the valve *h* will be forced away from its seat far enough to permit water to flow from the pipe *g* into pipe *f*, and so supply the cylinder C.

i is a pipe which leaves the bottom of the central cylinder, C, and enters the lower part of division D′ of the water-back. The divisions of the water-back are made by means of a diaphragm, *b*.

j is a water-pipe, which leaves the upper part of division D′ and passes through the bottom of the central cylinder, and is carried up therein high enough to deliver the hot water from the water-back at a point above the cool water in said cylinder. The hot water from said central cylinder is conducted to the rooms and places desired through a discharging-pipe, O.

By means of this arrangement I secure two independent systems of water-heaters within the same apparatus, and isolate each from the other, so that the kitchen and the upper chambers of a house may each have a constant supply of hot water without interfering one with the other.

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

1. The water-heating apparatus above set forth, whereby different floors or apartments of a house or hotel may have each its own system of water-heaters, substantially as above described.

2. Separating the water-spaces of the inner and outer cylinders by means of an air-space, substantially as and for the purpose above described.

JOHN MCCLOSKEY.

Witnesses:

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