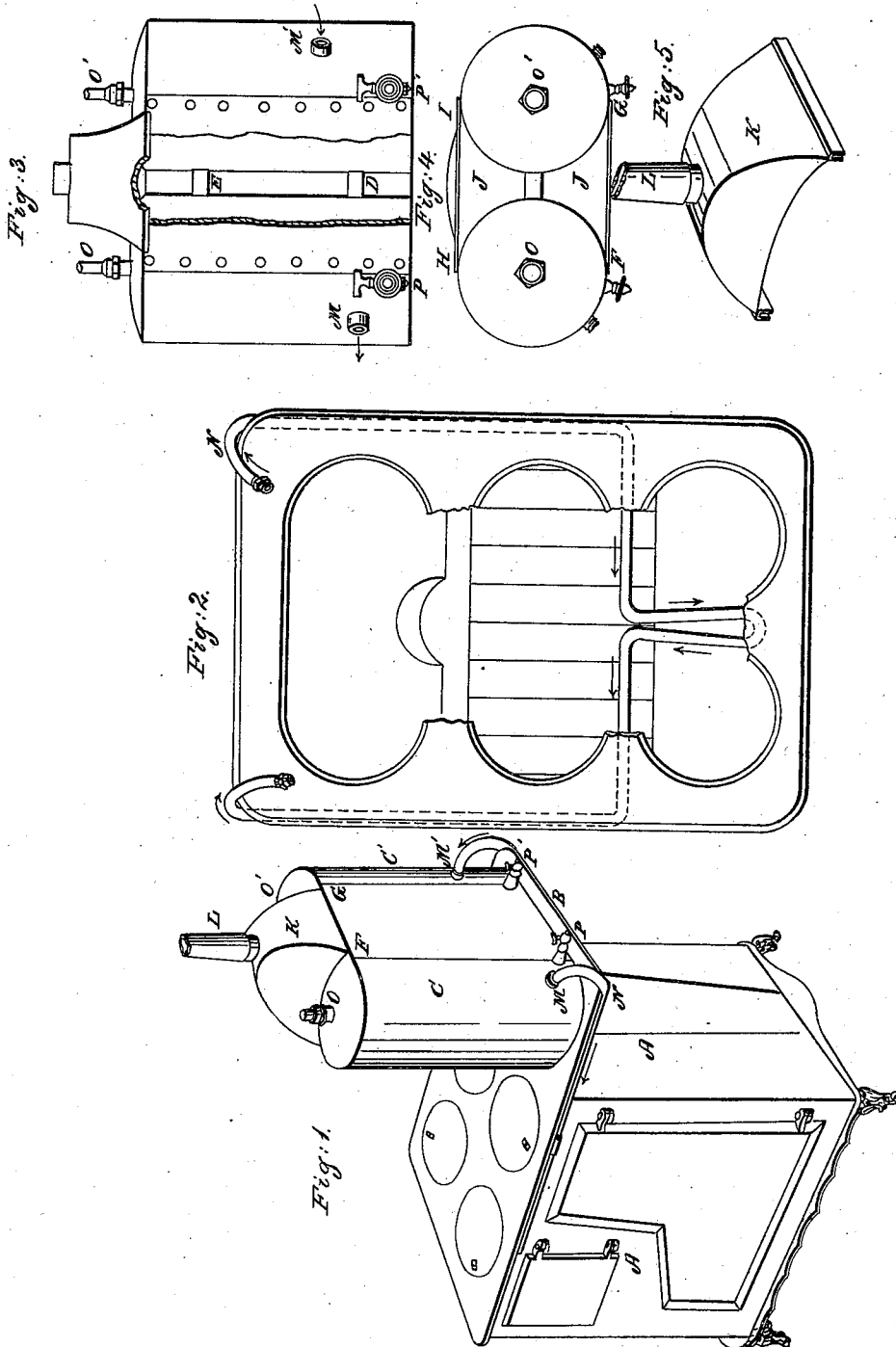


G. L. INGERSOLL.
Apparatus for Heating Water.

No. 24,353.

Patented June 7, 1859.



UNITED STATES PATENT OFFICE.

GEO. L. INGERSOLL, OF CLEVELAND, OHIO, ASSIGNOR TO J. E. INGERSOLL, OF SAME PLACE.

APPARATUS FOR HEATING WATER.

Specification of Letters Patent No. 24,353, dated June 7, 1859.

To all whom it may concern:

Be it known that I, GEORGE L. INGERSOLL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Apparatus for Heating Water; and I do hereby declare the following to be a full and complete description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved apparatus; Fig. 2, a top view, and Fig. 3 a view of sectional parts.

Like letters refer to like parts in the several views.

The nature of my improvement relates to the construction of an apparatus for heating water, the same to be attached to a cooking stove, and to be used in connection with water works, where a strong and constant pressure is experienced, the apparatus being so constructed that the water is heated in its passage through it, to any part of the house where it is desirable to convey heated water.

A, Fig. 1, represents a cook stove with an extension back B, and upon this, I place the heater, C, C'. This consists of two cylinders of copper, each about twelve inches in diameter, and two feet six inches in height. These are connected both at the top and bottom by small pipes, as seen at D, E, for the purpose of establishing a free communication between the cylinders C, and C'. These cylinders are also united at F, G, and H, I, by a plate of metal as seen in Figs. 1, 3 and 4, thus forming the space J, J, which constitutes the flue through which the smoke and heat ascend, to the pipe above. The top of the cylinders C, C', including only the space F, G, H, I, is surmounted by a cap K, from the top of which, leads the stove pipe L. The bottom of each cylinder is concave, or arched upward to enable it to withstand the pressure of the water.

At M, Figs. 1, 2, and 3, is a pipe with a coupling joint leading into the cylinder C, and connecting with the iron pipe N, which leads around into the stove, and is brought into contact with the fire in the fire box, as seen in Fig. 2. It is thence carried around upon the opposite side of the stove, and enters the cylinder C', at M', several inches higher than the pipe M, in the cylinder C.

The object of this difference in the height, 55 of the pipe where it leaves and enters the cylinders C, and C', is, to establish a current or flow of water through the pipe N, the cold water from the fountain being always admitted into the cylinder C, at the ingress 60 pipe O, Figs. 1 and 3, and passing out at the egress pipe O', Figs. 1 and 3.

The arrows in the several figures indicate the direction of the flow of water, through the several pipes.

A communication is also established between the cylinders by the pipes D, and E.

At P, P', are seen cocks for drawing water, into vessels, for kitchen use. From the coupling O', pipes are distributed to the various parts of the house, where hot water is wanted.

In consequence of the flow of cold water, into the cylinder C, and the supplying of the cylinder C', from the cylinder C, the water 75 in the cylinder C' will always be the hottest, and by the peculiar arrangement of the pipes, a current is established and constantly maintained in the direction of the arrows.

The ingress pipe O, extends to within two 80 inches of the bottom of the cylinder C, by means of which the flow of water is more perfectly established than it would be if the pipe only entered the cylinder a short distance. The cocks P, P', in addition to the 85 above named use, can be used for sediment cocks, or for emptying the heater.

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

1. The double cylinder heater C, C', the same being united by the plates G, F, H, I, so as to form the space J, J, for the ascension of the heat and by the pipes D, E, for the passage of the water, the heating space being covered by the cap K, and the parts here named being arranged as set forth.

2. I also claim in combination with the two cylinders C, C', the ingress pipe O, extending too near the bottom of the cylinder 100 C, the exit pipe O', and the pipe N, in connection with the pipes D, E, for the purpose of establishing a circulation and rapid heating of the water.

GEO. L. INGERSOLL.

Witnesses:

I. BRAINERD,

W. H. BURRIDGE.