

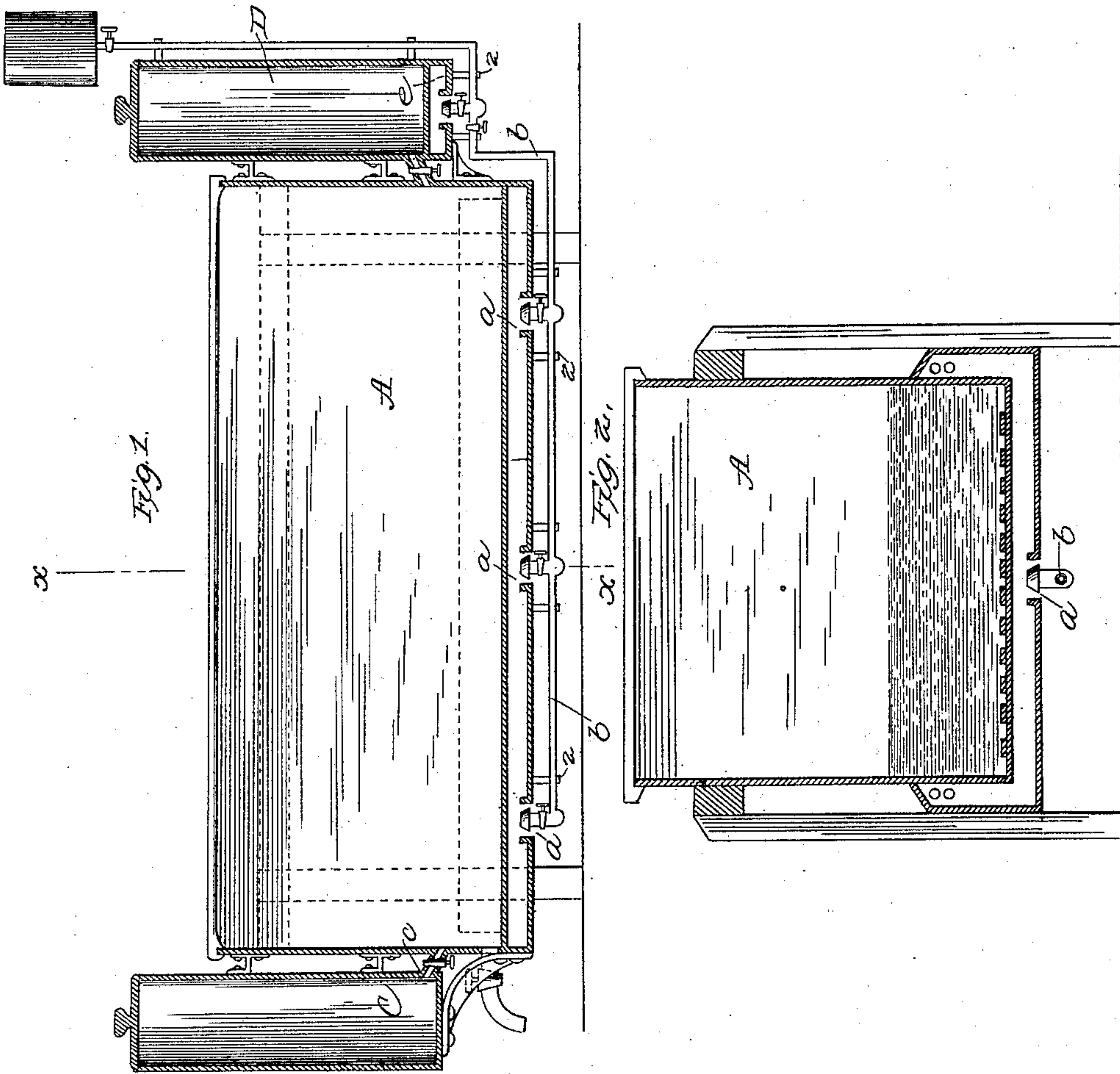
(No Model.)

F. P. DAY.

BATH TUB.

No. 336,797.

Patented Feb. 23, 1886.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANK P. DAY, OF JACKSON, MICHIGAN.

## BATH-TUB.

SPECIFICATION forming part of Letters Patent No. 336,797, dated February 23, 1886.

Application filed October 8, 1884. Serial No. 145,010. (No model.)

*To all whom it may concern:*

Be it known I, FRANK P. DAY, of Jackson, in the county of Jackson and State of Michigan, have invented a new and useful Improvement in Bath-Tubs; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to bath-tubs, and its object is to dispense with the bulky and expensive arrangement now used to convey hot water from the range-boiler to the tub by making the tub a self-heater and applying the heat directly thereto.

My invention consists, first, in forming a bath-tub with an exterior shell extending beneath the bottom of the tub and a short distance up each side, with openings in said shell for the admission of burners, whereby the heat is applied directly to the bottom and sides of the bath-tub.

My invention consists, further, in forming a bath-tub with a chamber across its bottom and extending up its sides, with openings therein for the admission of burners, with suitable connections between said burners and a tank containing gasoline or other suitable inflammable material.

My invention consists, also, in combining with a tub having a hot-air chamber beneath it and upon each side, a cold-water tank upon one end, and a tank upon the other end capable of having its contents heated by a burner playing upon the bottom thereof, this burner being preferably connected to the tank by the same pipe leading to the burner or burners beneath the tub.

In the drawings illustrating my invention, Figure 1 represents a side elevation of a bath-tub with my improvements attached. Fig. 2 is a central vertical section of the same on line *x x* of Fig. 1.

In carrying out my invention I may use an ordinary bath-tub, such as shown at A. This is supported in position by means of suitable legs and connecting-pieces, such as shown. Across the entire bottom and up the sides of the tub a suitable distance I form a hot-air chamber by attaching an exterior shell to the sides of the bath-tub proper. This may be done in any suitable way by riveting or otherwise. At intervals in the bottom of this shell,

preferably in the center, openings *a a a*, are formed or adapted to receive rose-burners. These burners are connected by couplings to a pipe for the fuel, this pipe being marked *b*, and supported from the bottom of the hot-air chamber by hangers, 2, as shown. Of course it is understood that rose-burners are not essential, as any other kind may be used instead. I have shown three of these burners all provided with suitable cocks; but any desired number may be used instead. The pipe *b* runs along the bottom of the tub and thence to a tank filled with gasoline or similar fluid, at a suitable height to give pressure at the burners. On the left-hand end of the tub I have represented a bracket supporting a cold-water tank, C, which may be of suitable form and size. It is provided with an opening at the top for the admission of water, and at the bottom has a pipe, *c*, provided with a suitable valve leading into the tub. It will be understood, however, that this tank is only necessary in the country or places where water under pressure is not to be had. Where there is a water-service the faucet of the pipe can overhang the edge of the tub as usual.

It will be seen in the action of the apparatus that a quantity of water is turned into the tub from the cold-water tank, and the burners ignited, the cocks of each having been turned to permit the flow of the liquid fuel. This causes an intense heat, which may be regulated to any extent desired. This heat is directed upon the bottom of the tub and fills the space between the bottom and the casing and the sides of the tub and the casing, heating the water from three sides. This heats the water thoroughly and upon all sides, thus acting uniformly. As soon as the water is sufficiently heated, the supply of the fuel to the burners may be cut off.

In case it should be desired to use a small quantity of hot water, whether to rinse off after a bath or for any other purpose, I provide a tank, D, similar to the tank C, but at the opposite end of the tub. This tank is supported upon a bracket similar to the one supporting tank C, and has an inlet-opening at the top and a pipe leading to the tub and provided with a suitable valve. This tank has a false bottom, *e*, with a central opening for



the admission of a burner similar to those before described. This burner is connected to the pipe *b* leading to the tank and has suitable valves, as shown. By this arrangement  
5 hot water can always be kept in the tank D, and admitted to the bath-tub as desired.

I am aware that bath-tubs have been heretofore constructed with furnaces arranged at one end, and with flues running through the  
10 tub so that the products of combustion could pass through and heat the water contained in the tub, and also that water-backs have been provided with gas-jets playing against the same to heat the water contained there-  
15 in, and, further, that reservoirs have been provided, placed in close proximity to the tub and heated by various means, and I do not wish to be understood as claiming, broadly, such construction.

20 Having thus described my invention, what I claim is—

The combination of the bath-tub of ordinary internal construction, of an external shell extending beneath the bottom and up the sides of the tub, of burners arranged at inter-  
25 vals at openings in the side external shell, whereby heat is applied directly to the bottom of the bath-tub, pipe-connections from said burners to the reservoir for supplying the fuel, and an auxiliary tank-connection to the  
30 bath-tub having a pipe-connection, the said auxiliary tank having a false bottom and a burner placed in the opening thereof and connected to the reservoir, all substantially  
35 as described.

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

FRANK P. DAY.

Witnesses:

W. R. HEATON,

GEORGE J. WERNER.