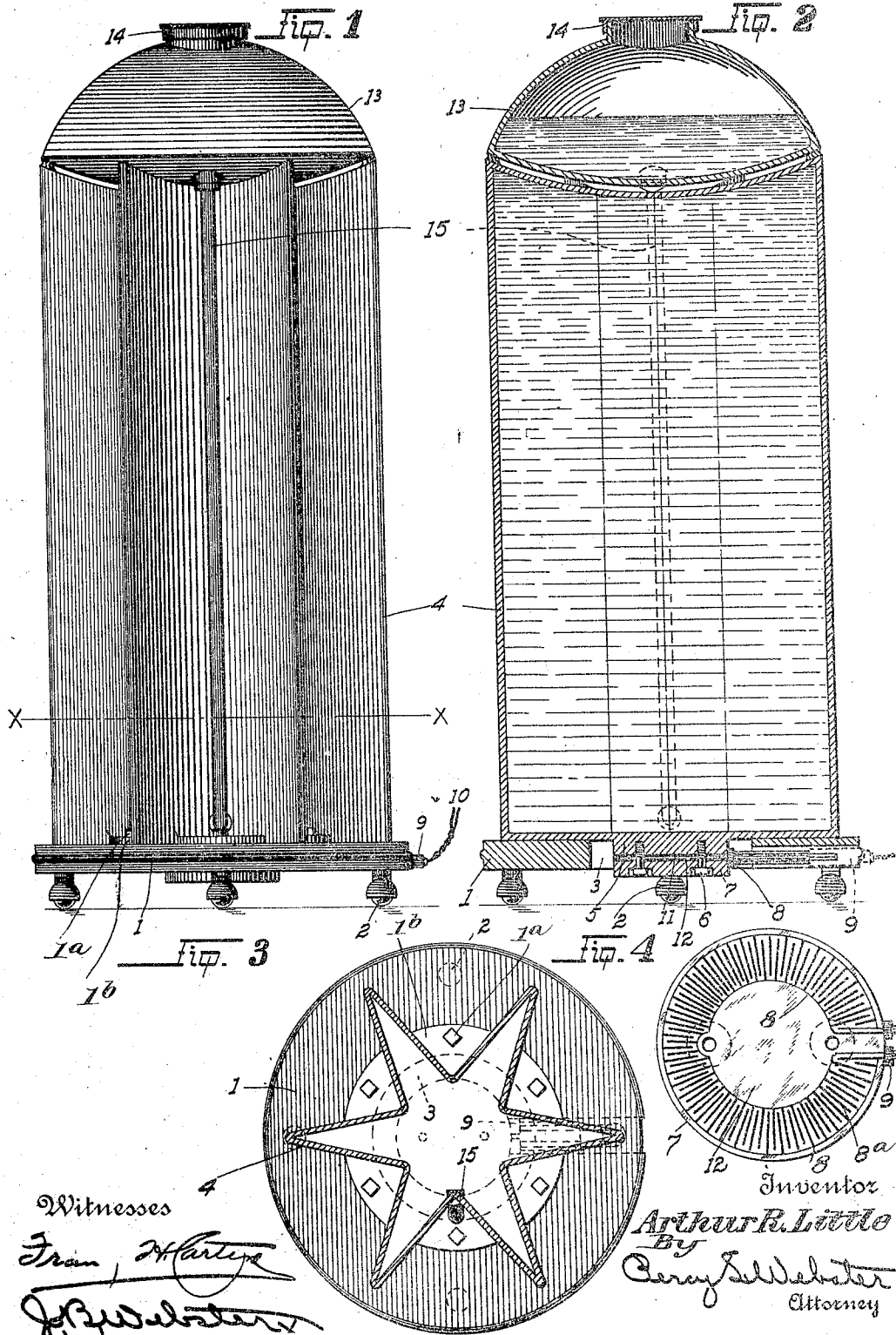


A. R. LITTLE.
 PORTABLE STEAM OR HOT WATER RADIATOR.
 APPLICATION FILED JULY 5, 1910.

1,039,976

Patented Oct. 1, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR R. LITTLE, OF STOCKTON, CALIFORNIA.

PORTABLE STEAM OR HOT-WATER RADIATOR.

1,039,976.

Specification of Letters Patent.

Patented Oct. 1, 1912.

Application filed July 5, 1910. Serial No. 570,231.

To all whom it may concern:

Be it known that I, ARTHUR R. LITTLE, a citizen of the United States, residing at Stockton, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Portable Steam or Hot-Water Radiators; and I do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in heaters or radiators of all kinds, the object of the invention being to produce a portable heater or radiator and one which employs electricity for the heating of the hot water or steam.

A further object of the invention is to produce such a device as will be simple and inexpensive and yet exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a side elevation of the complete device. Fig. 2 is a vertical section of the same. Fig. 3 is a sectional view taken on a line $x-x$ of Fig. 1. Fig. 4 is a top plan view of a resistance wire holder.

Referring now more particularly to the characters of reference on the drawings, 1 designates the main base of the radiator supported on rollers or casters 2 and having a central orifice 3.

By means of bolts 1^a projecting through a plate 1^b and through the base 1, there is secured to the base 1 a radiator drum 4, such plate 1^b being a part of such drum 4. Said drum 4 has an outer corrugated surface of any desired shape, but preferably substantially star shaped as shown to give as great a radiating surface as possible. On the bottom of the member 4 is a central embossment 5 projecting into the recess 3 and secured to

which by bolts 6 is a plate 7 between which members 5 and 7 is secured an ordinary form of resistance element or grid 8 made up of sheet metal slit alternately upon opposite sides as at 8^a so as to provide a zig-zag path for the electric current. Said element has terminals 9 which connect with the current wires 10. This resistant heating wire is insulated from the members 5 and 7 by suitable insulations 11 and 12 respectively composed of mica or the like. Secured to the top of the member 4 is an auxiliary chamber or drum 13 having a removable cap 14 such drum 13 connecting with the lower end of the member 4 by means of a pipe 15 whereby the water is poured first into the member 13 and passes through the pipe 15 to the drum 4 which is always kept full. The heat from the member 8 heats this water which causes it to radiate heat from the outer surface of such member 4. If desired the cap 14 may be left open thus permitting a vapor to rise into the atmosphere of a room which has been found to be beneficial for purifying purposes.

From the foregoing description it will readily appear that I have produced such a device as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviation from such detail may be resorted to as does not form a departure from the spirit of the invention.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A device of the character described comprising a portable base, a receptacle bolted therein, such receptacle having an outer corrugated surface on its sides and a concave surface on its upper end, an auxiliary receptacle having a convex surface fitting into said concave surface on said first named receptacle, a pipe connecting the lower end of said auxiliary receptacle with the lower end of said first named receptacle, and means for heating said first named receptacle, as described.

2. A device of the character described comprising a portable base having a central

orifice, a drum secured to said base, a central embossment on the bottom of said drum projecting into said orifice, a plate bolted to said embossment, a resistant wire projecting between said embossment and said plate and suitably insulated therefrom, a drum on the upper end of said first named drum, and a pipe connecting the lower end of said auxiliary drum with the lower end of said first named drum, as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR R. LITTLE.

Witnesses:

JOSHUA B. WEBSTER,
FRANK H. CARTER.