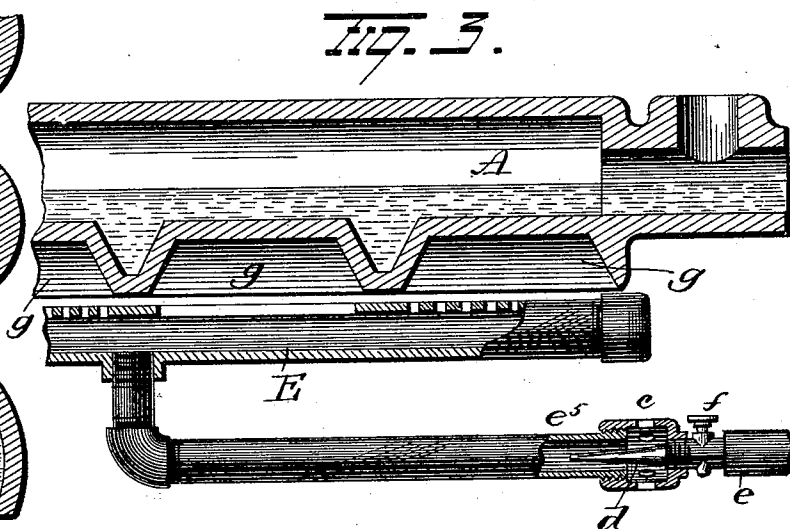
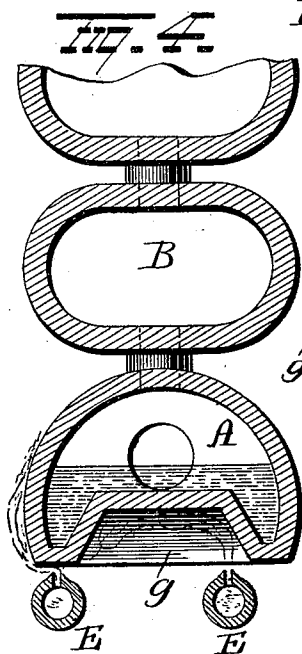
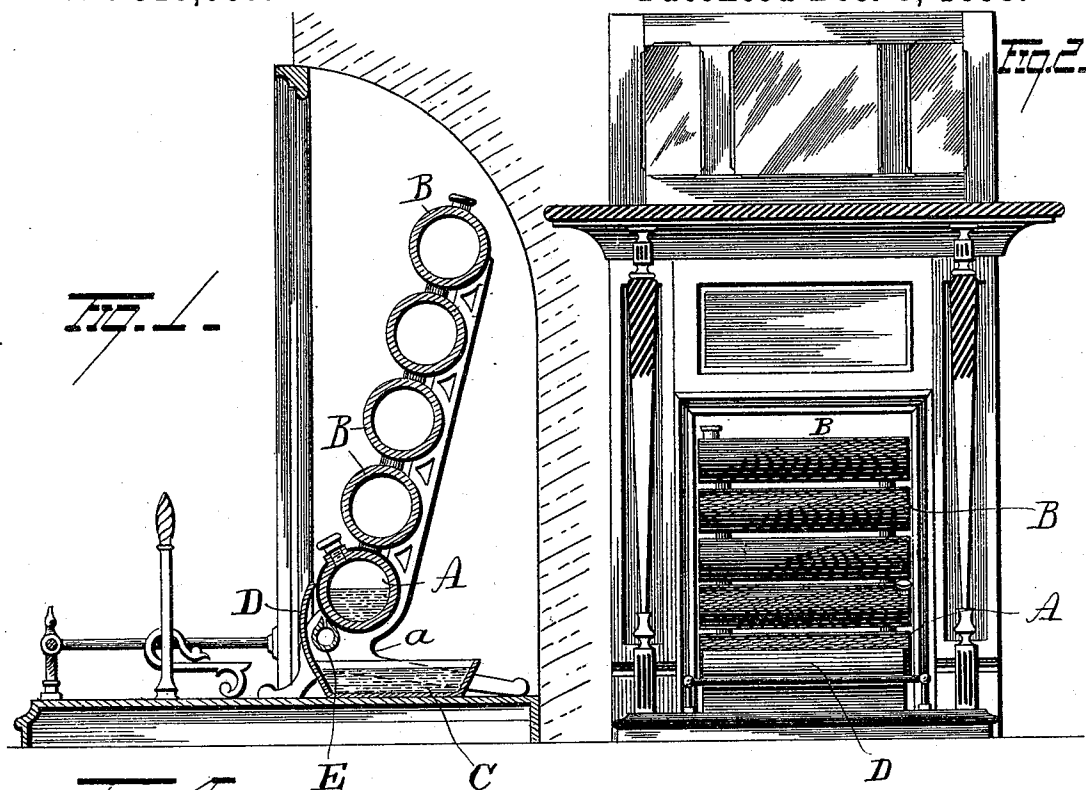


(No Model.)

C. R. HARRIS.
PORTABLE STEAM RADIATOR OR HEATER.

No. 510,067.

Patented Dec. 5, 1893.



Witnesses
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J. F. Downing.

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UNITED STATES PATENT OFFICE.

CHARLES R. HARRIS, OF WILLIAMSPORT, PENNSYLVANIA.

PORTABLE STEAM RADIATOR OR HEATER.

SPECIFICATION forming part of Letters Patent No. 510,067, dated December 5, 1893.

Application filed June 17, 1892. Serial No. 437,092. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. HARRIS, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain
5 new and useful Improvements in Portable Steam Radiators or Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

My invention relates to an improvement in portable steam radiators or heaters, adapted to be placed within a fire place without altering the fire place or mantel.

15 My invention consists in a water log or chamber and one or more steam chambers communicating therewith, a burner located below the water log or chamber for heating same, a water pan below the burner and a face
20 plate connected to the pan and concealing the burner.

My invention further consists in certain parts and combinations of parts as will be more fully described and pointed out in the
25 claims.

In the accompanying drawings Figure 1 is a view in vertical section through my improved device showing it within a fire place. Fig. 2 is a view in front elevation of same.
30 Fig. 3 is a view in longitudinal section of the water log and burner and Fig. 4 is a view in transverse vertical section of the water log and several steam chambers.

Heretofore in some of this class of heaters,
35 the water logs have been connected to the mantel, and in others the mantel acts as a radiator. In all of them however the heater is a permanent fixture with the mantel and the latter is constructed to co-operate with the wa-
40 ter log.

In my device the attachment is wholly independent of the mantel and can readily be removed bodily therefrom by simply disconnecting it from the gas supply pipe, and set
45 up in any other part of the room, and if the gas supply pipe should be flexible, it is not even necessary to disconnect the gas supply pipe and burner.

A represents a water log preferably shaped
50 and ornamented to represent a log of wood, and provided on its outer face with fibrous asbestos or equivalent material which being

arranged within the influence of the flame, is heated at various points to incandescence and produces a pleasing effect. 55

Located above the water log A is one or a series of steam chambers B, communicating with one another, and the lower one of the series communicating with the water log A. I prefer that these chambers B should be shaped
60 like, and ornamented to represent the ordinary wood log piled one upon another, but if preferred they can be plain and arranged in any suitable manner. In any event they are designed for the free circulation of steam generated in the water log A. They are connected together so as to be self supporting,
65 and are preferably oblong in horizontal diameter so as to present larger heating surfaces without looking too bulky. The water log A, and the chambers B thereon, can be supported on legs *a*, connected to log A, or they can rest on legs or standards projecting up from the upper edge of the water pan C, but I prefer to support the series on legs,
70 which as shown in Fig. 1, are continued up in the shape of brackets and support the entire series. This pan C is preferably approximately the length of the log A and is designed to catch heated scales and other matter falling from the log A or chambers B and also to hold water designed to be evaporated by means to be hereinafter described for supplying moisture to the room. This pan C can rest solidly on the hearth or be held slightly
85 elevated by short legs if preferred, and is provided with a front face plate D also preferably curved and ornamented to represent a wood log. The plate D rests at its upper end in close proximity to the log A and to the
90 flame and is integral with or in contact with the metal pan C or in contact with the water in said pan and is heated sufficiently high to cause a slow evaporation of the water in the pan. 95

The burner E is located between the pan C and log A and consists simply of a pipe approximately the length of the log A and provided on its upper surface with a series of slits or openings for the escape of the commingled
100 air and gas. This burner is provided with a pipe *e*⁵ having a cap *c*, open or perforated for the free admission of air, and also receives the gas nozzle *d* connected to pipe *e*. The

nozzle *d* terminates at a point beyond the adjacent end of pipe *e*³, and hence acts as an injector to draw in the air which immediately becomes intimately mixed with the gas, and being largely in excess of the gas burns with a bluish tint and emits little or no light. The nozzle *d* is provided with a cock *f* for regulating the flow of gas and for cutting off the flow. The burner can be supported from hangers depending from the log *A* or on the legs supporting the log and radiator or it can rest upon pan *C*, and by simply disconnecting the burner from the gas supply pipe the entire heater can be readily and quickly removed from the fire place. By employing a flexible supply pipe *e*, the whole apparatus can be removed from place to place in the room without disconnecting any parts.

In order to utilize the gas flames to advantage and reduce the loss of heat to a minimum, I prefer to provide the bottom of the log with a series of recesses or pockets *g* as shown in Figs. 3 and 4 which confine the flames to the under side of the log *A*, and prevent them spreading over the sides of the same.

In some instances it is desirable to employ two burners as shown in Fig. 4, one located under the pockets, and the other near the front end of the log for heating the asbestos. With this construction the burner under the pockets is the heating burner while the other, while it naturally assists in heating is more for the purpose of the effect produced by keeping the asbestos in a state of incandescence. By providing each burner with a valve or cock either or both can be cut off at will.

It is evident that numerous slight changes might be resorted to without departing from the relative arrangement of parts herein shown and described. Hence I would have it

understood that I do not restrict myself to the exact construction shown and described, but,

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

1. A portable steam heater adapted to enter the niche of a fire place, the heater comprising a water log and connected steam chambers having outer surface to give the appearance of a log or logs piled one upon another, a heating device below the water log, and a face plate constructed to represent a log, and projecting upwardly from the pan to a point above the heating device to conceal the latter and be heated thereby and cause a slow evaporation of the water in the pan, substantially as set forth.

2. A portable steam heater adapted to enter the niche of a fire place consisting of a bracket or rack, a water log and one or more connected steam chambers, said log and chambers supported on the bracket or rack, a water pan beneath the log and a heating device located in proximity to the log, substantially as set forth.

3. A portable heater adapted to enter the niche of a fire-place, the heater consisting of a water log, a series of connected steam chambers, a burner located beneath the water log, a water pan beneath the burner, and a bracket or rack for supporting the log, steam chambers, burner and water pan, substantially as set forth.

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

CHARLES R. HARRIS.

Witnesses:

E. I. NOTTINGHAM,
HARRY B. ARMES.