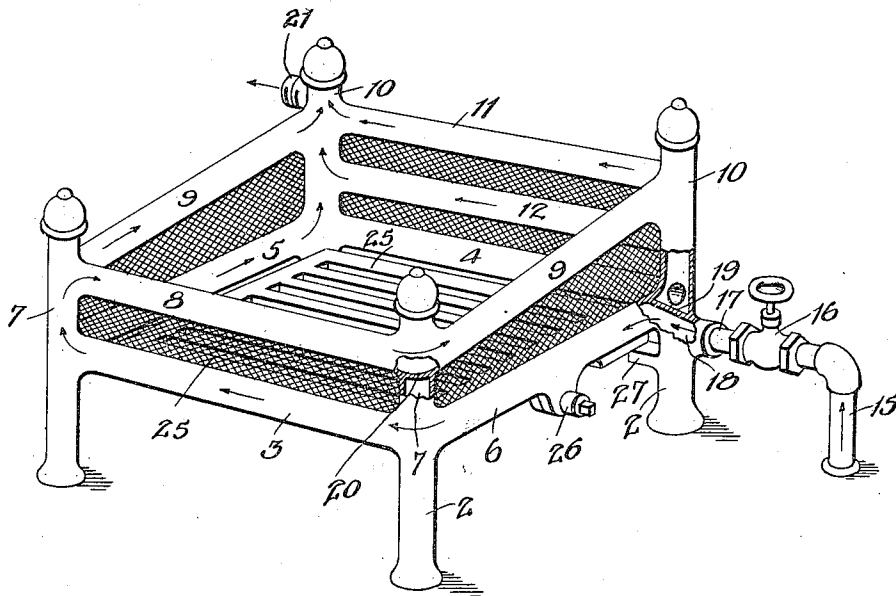


M. G. READ.
WATER HEATING FIREPLACE GRATE AND BASKET.
APPLICATION FILED JULY 9, 1917.

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Inventor
Marion G. Read

By *Wm. Smith Lawrence*,
Attorneys

UNITED STATES PATENT OFFICE.

MARION G. READ, OF NEW YORK, N. Y.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MARION G. READ, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Water-Heating Fireplace Grates and Baskets; 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 appertains to make and use the same.

This invention relates to heating apparatus; and more particularly to a combined fireplace grate and heater of tubular construction which provides for the heating of water which may be circulated through radiators or other points of distribution as may be desired.

It is one of the objects of the present invention to provide a simple, ornamental, practicable and inexpensive device in the form of a fireplace grate or basket which may be utilized to heat water which may be distributed to radiators suitably arranged through various rooms in a dwelling, or the heated water may be delivered to a receiver or tank for domestic purposes. It is another object of the present invention to provide a fireplace basket or grate of rigid substantial construction of few parts whereby joints are eliminated as far as possible; to provide an integral tubular basket or grate for fireplaces, designed for connection to suitable water distributing and supplying means. Another object of the present invention is to provide a grate or basket having tubular structural elements so arranged and designed as to provide for the maximum efficiency of heating and circulating water either through a heating system in the building or through a receiving tank.

With the above and other objects in view, the present invention consists of a fireplace grate or basket provided with tubular members preferably integrally constructed and having suitable barriers in the members to control and divert the flow of water which passes through the members of the basket while the latter is utilized for heating purposes so that water may be rapidly passed through the structural members of the basket and thereby heated. One form of the invention is described in the following specifica-

tion and illustrated in the accompanying 55 drawing, in which—

The figure is a perspective view partly broken away of the improved fireplace basket and water heater.

The water heating basket herein disclosed 60 may be of various forms, proportion and size, and comprises a series of corner legs 2 all respectively connected by fore and rear members 3 and 4 and parallel side members 5 and 6, all of tubular construction, the front 65 member 3 being connected by upright tubes 7—7 to an upper front bar 8 from which there extends rearwardly at 9—9, upwardly inclined tubular members joining in rear to the posts 10—10 which are connected at the 70 upper portion by a rear member 11 between which and the bottom tubular member 4 there may be provided an intermediate tubular member 12. Water may be supplied to the interior of the tubular members from 75 any suitable source as indicated by a supply pipe 15 which may have a conveniently located valve 16 which is connected at 17 to the intake connection 18 which is shown in the present instance as located at the rear 80 end of the tubular bottom section 6 at the juncture of the leg 2 at the rear of the grate. For the purpose of diverting the flow of the water through the tubular members, there is provided at the lower end of one of the 85 posts 10 at a point just above the intake 18, a diaphragm or baffle member 19, closing the passage to said post 10 so that the water is diverted forwardly through the side member 6 from which it passes through the front 90 member 3 as indicated by the arrow, and thence up the opposite post 7 and through the front member 8 from which it flows through the member 9 at the right of the basket and also passes through the member 95 9 at the left end of the basket. Water from the front member 3 may also flow through the lower pipe 5 to the rear members 4, 11 and 12 the water passing through the member 4 being heated and rising in the right 100 hand back corner post 10 and flowing thence transversely through the members 11 and 12 and toward an outlet which is provided at 21 in this instance formed on one of the rear posts 10 of the grate. For the purpose of 105 preventing the flow of water immediately from the right hand front post 7 into the upper right hand tubular member 9 a baffle

20 is formed between the members 6 and 9 at the top of the right-hand post 7, whereby the water is diverted through the lower front member 3. The baffle diaphragm 20 is located preferably at the top of the right post 7 and in the plane of the bottom of the front tubular member 8 and at the lower end of the inclined side member 9 at the right of the grate, and thereby eliminating the formation of pockets and thus facilitating the drainage of the water from the grate when this is desired.

It is obvious that the basket may assume various designs for ornamental purposes and preferably will be provided with a tiltable fire grate indicated at 25, mounted on a pivot 26 the rear edge of the grate being adapted to fall back upon a supporting lug 27 whereby the grate is held in a horizontal position for supporting fuel material in the basket.

It will be seen that by forming the various tubular elements in one integral construction, that possibility of leakage such as would occur if the members were separable and removably jointed together, is eliminated. It will be seen also, that by the peculiar arrangement of the tubular members and the introduction of the baffles therein, the rapidity of the flow of water as it is heated may be determined as desired by the construction of the elements so that the water may be brought to the desired temperature as it flows through the tubular members. Another advantage of forming the various tubular members of integral construction to produce the fire basket is that it presents a very neat and ornamental appearance, so that while it may be utilized for water heating purposes it does not detract in the least from its attractiveness as a fireplace grate and may therefore be readily installed in any of the rooms of a dwelling or apartment in an open fireplace, and by locating the supply and outlet or distributing connections in the back of the basket these latter are substantially concealed when arranged in a fireplace and the heated water taken from the outlet 21 of the basket to any suitable point of distribution through the dwelling or building.

What is claimed as new is:—

1. A water-heating, fire-place basket comprising a frame having a set of tubular side, end, front and rear elements in upper and lower courses which are vertically connected by tubular corner posts, corner legs elevating the basket, one of said legs having a supply connection communicating with the

lower course, a baffle interposed between the chamber in said leg and the relative post, one of the elements of the lower course opening into the post behind and above the baffle, said baffle preventing a circuit of water through the lower course, and a baffle in one of the posts and between the two courses to prevent flow of water directly up through the post.

2. A water-heating, fire-place basket comprising a frame having a set of tubular side, end, front, and rear elements in upper and lower courses which are vertically connected by tubular corner posts, the lower course being horizontal, carrying a grate and the upper course being inclined downwardly and forwardly, corner legs elevating the basket, one of said legs having a supply connection communicating with the lower course, a baffle interposed between the chamber in said leg and the relative post, one of the elements of the lower course opening into the post behind and above the baffle, said baffle preventing a circuit of water through the lower course, and a baffle in one of the posts and between the two courses to prevent flow of water directly up through the post.

3. A water-heating, fire-place basket comprising a frame having a set of tubular side, end, front, and rear elements in upper and lower courses which are vertically connected by tubular corner posts, corner legs elevating the basket, one of said legs having a supply connection communicating with the lower course, a baffle interposed between the chamber in said leg and the relative post, one of the elements of the lower course opening into the post behind and above the baffle, said baffle preventing a circuit of water through the lower course, and means interposed in the channel between the lower end of the upper course and the lower course to divert water through the lower course.

4. A water-heating, fire-place basket comprising a lower course of communicating tubes having corner legs and an inclined upper course of communicating tubes, a baffle in one of the posts for preventing flow of water from the lower course into the lower end of the upper course, one of the legs having an intake passage leading to one of the members of the lower course, and a baffle interposed at the junction of said leg and its respective post and on one side of which one member of the lower course communicates with said post.

In testimony whereof I affix my signature.

MARION G. READ.