

E. G. MUMMERY.
A HYDROCARBON BURNER AND WATER FEED THEREFOR.
 APPLICATION FILED OCT. 29, 1908.

932,803.

Patented Aug. 31, 1909.

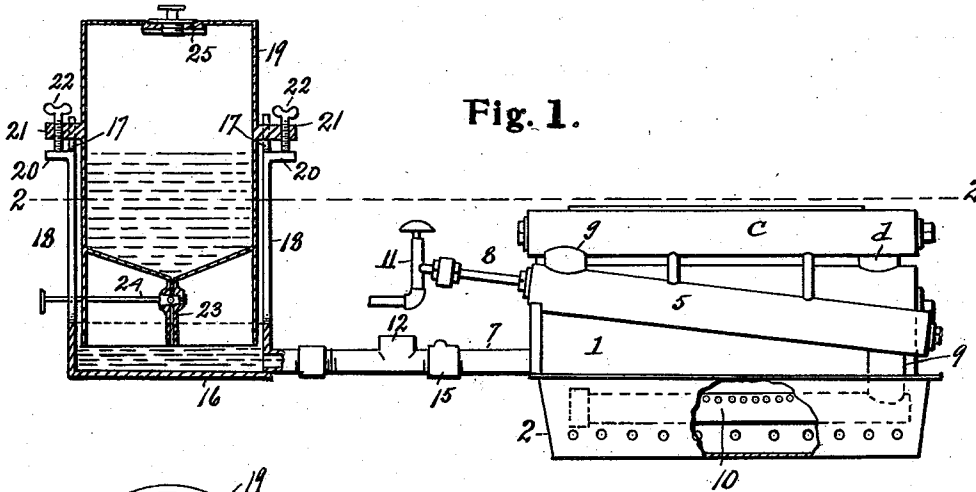


Fig. 1.

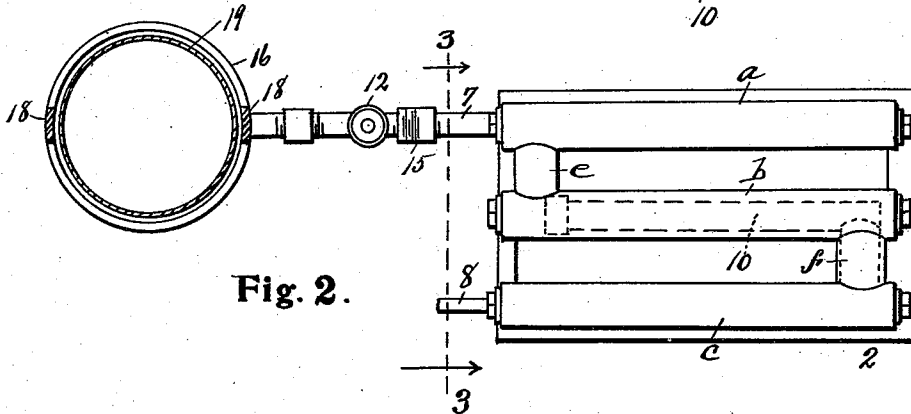


Fig. 2.

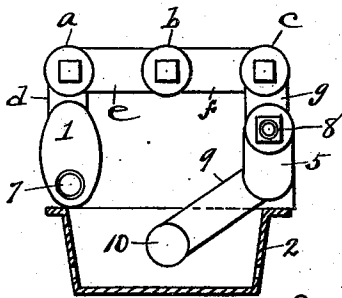


Fig. 3.

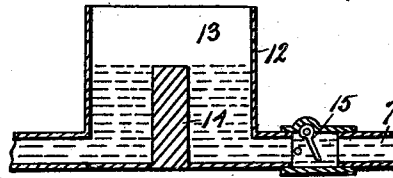


Fig. 4.

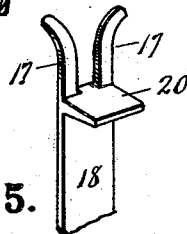


Fig. 5.

Witnesses
O. B. Baenziger.
E. E. McIvram

Inventor.
Edwin G. Mummery
Newell S. Wright.
 Attorney.

UNITED STATES PATENT OFFICE.

EDWIN G. MUMMERY, OF DETROIT, MICHIGAN.

HYDROCARBON-BURNER AND WATER-FEED THEREFOR.

932,803.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed October 29, 1908. Serial No. 460,007.

To all whom it may concern:

Be it known that I, EDWIN G. MUMMERY, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Hydrocarbon-Burners and Water-Feeds Therefor, of which the following is a specification.

My invention has for its object certain new and useful improvements in a hydrocarbon burner and a water feed therefor.

More especially my present application pertains to the novel water feed in combination with the burner, as hereinafter described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation and showing parts in vertical section. Fig. 2 is a plan view showing parts in horizontal section. Fig. 3 is an end view showing parts in vertical section. Fig. 4 is a detail view in vertical section showing the construction of the water indicating device. Fig. 5 is a detail view in perspective, showing the construction of one of the tank supporting arms.

I carry out my invention as follows:

As illustrated in the accompanying drawings the burner is provided with a steam generating chamber 1 preferably extending above the upper edge of a burner pan or tray 2, said chamber communicating at one end thereof with superheaters, preferably three in number as through connecting pipes indicated at *a, b, c*. The superheaters lead to a commingling or mixing chamber 5 as through a connecting pipe *g*. With the steam generating chamber communicates a water feed pipe 7. With the mixing chamber communicates a hydrocarbon feed pipe 8 which may be provided with a controlling valve 11. The mixing chamber at its extremity opposite the entrance of the pipe 8 is formed preferably with a downwardly projecting portion 9 communicating with the main burner pipe 10 preferably located in the base of the tray 2. It will be understood that a hydrocarbon fuel supply tank (not shown) is connected with the feed pipe 8.

It will be understood that additional burners may be supplied with fuel from the mixing chamber or from the main burner pipe if desired. The main burner pipe is perforated to emit vaporized fuel therefrom in jets to heat the steam generator and the mixing chamber. The steam generator, the superheaters, the mixing chamber, and the

main burner pipe, are designed to be located in the fire box of a stove, range, or furnace as the case may be.

Connected with the water feed pipe 7 is a water indicator 12 formed with an upwardly projecting chamber 13, preferably open at the top, and within which is a standard 14 projecting upward to the required height of the water line in the steam generating chamber. A check valve 15 may be located in the water supply pipe, to check back pressure of steam, the check valve however, being so constructed as to permit the necessary amount of water to pass to the generator.

Connected with the water feed pipe 7 is a shallow water basin 16 which may be located in any convenient place. This basin in accordance with my present invention, is a comparatively shallow pan or chamber of sufficient height to contain a water supply to feed the pipe 7, and the steam generating chamber. This basin is shown provided with upwardly projecting supports 18 upon the upper ends of which is supported a water supply can or tank 19. To this end said supports are preferably constructed with laterally projecting shoulders 20 and with upwardly extended bifurcated arms 17, the can being provided with lateral shoulders 21 engaged upon said bifurcated supports and carrying adjusting screws 22 bearing upon the shoulders 20 so that the can may be supported upon said supports at a desired height. At the base of the can is a channel 23 to lead the water from the can into said basin, said channel being preferably provided with a controlling valve 24. At the upper end of the can is shown a filler cap 25.

It will be obvious that it is not necessary to remove the can in order to fill it with a fresh supply of water. By closing the valve 24 and removing the filler cap, the can may readily be filled. At the same time the can may be readily removed for filling if preferred.

When the valve 24 is open water will feed through the channel 23 into the basin, until the water in the basin seals the lower end of the channel. This will take place when the water fed through the pipe 7 fills the steam generator to the required height.

What I claim as my invention is:

1. The combination with a hydrocarbon burner provided with a steam generating chamber, of a water feed for said chamber

comprising a shallow basin communicating with said chamber and having upwardly projecting supports constructed with laterally projecting shoulders, and a water supply tank or can carried upon said supports
5 constructed with laterally projecting shoulders, the shoulders of the can provided with adjusting screws bearing against the shoulders of said supports, said can supplying
10 water to said basin.

2. The combination with a hydrocarbon burner provided with a steam generating chamber, of a water feed pipe for said chamber comprising a shallow basin communicating with said chamber and having upwardly

projecting supports constructed with bifurcated arms at their upper ends and with laterally projecting shoulders, and a water supply tank or can provided with laterally projecting shoulders resting in the bifurcated arms of said support, the shoulders of the can provided with adjusting screws bearing upon the shoulders of said supports. 20

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

EDWIN G. MUMMERY.

Witnesses:

N. S. WRIGHT,

G. E. McGRANN.