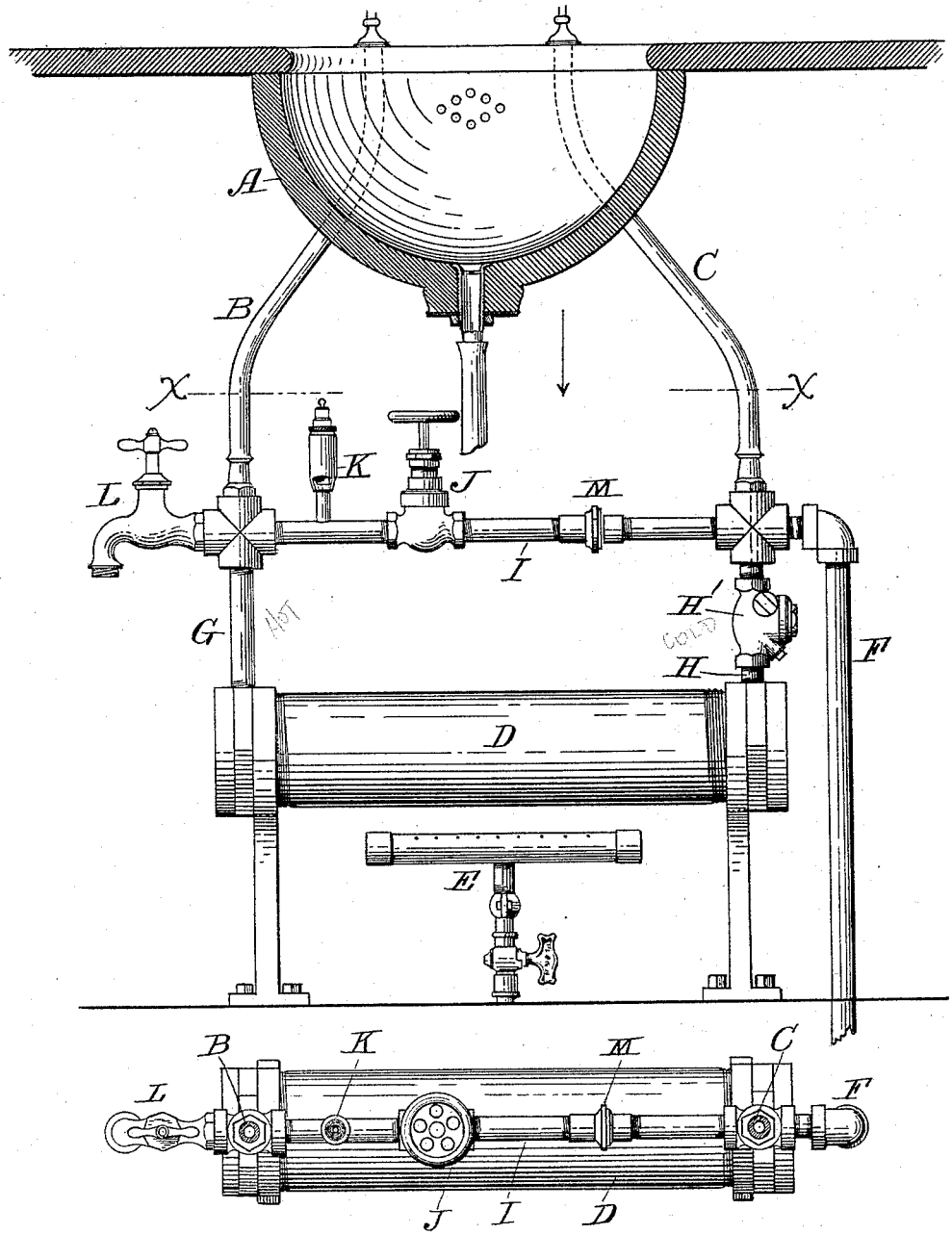
(No Model.)

J. H. MESSIER.

WATER HEATER.

No. 489,971. Patented Jan. 17, 1893.



Witnesses:
W. B. Nourse.
C. Forrest Stesson.

Inventor:
Joseph H. Messier
By A. A. Barker. Atty.

UNITED STATES PATENT OFFICE.

JOSEPH H. MESSIER, OF WORCESTER, MASSACHUSETTS.

WATER-HEATER.

SPECIFICATION forming part of Letters Patent No. 489,971, dated January 17, 1893.

Application filed July 16, 1892. Serial No. 440,247. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. MESSIER, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Water-Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side view of my said improved water heater, said figure also showing a central, vertical section of an ordinary wash-basin, to which said heater is applied, and Fig. 2 is a horizontal section taken on line *x x* Fig. 1, looking down and showing a top or plan view of the heater.

My improved water heater is designed more especially for use in barber shops, but may be applied to various other purposes as well, if desired.

It consists in combining with the supply pipes of a basin, sink, or other similar plumbing fixture, a heating apparatus consisting of a horizontal boiler having a suitable burner underneath, and provided with a special system of pipes connected with the cold water supply, and with the supply pipes of the fixture; also having means for regulating the supply of both hot and cold water and for automatically regulating the steam pressure, as will be hereinafter more fully set forth.

In order that others may better understand the nature and purpose of my said invention, I will now proceed to describe it more in detail.

In the drawings, A represents an ordinary set wash-basin, and B, C the hot and cold water supply pipes thereto, respectively.

D is the boiler of my improved heater, which is arranged horizontally under said basin. E is the burner, preferably arranged under said boiler, for heating the water contained therein, and F the main cold water supply pipe connected with the piping of the heater.

A hot water pipe G, and cold water pipe H, extend up from the ends of the boiler which connect with a horizontal line of piping, I. The cold water supply pipe, and the supply pipes to the basin being also in this instance, connected directly with said horizontal line of piping, but I do not limit myself thereto, as the same result would be attained by connection with the piping at either side thereof.

Between pipe I and the boiler, in pipe H, is arranged a suitable check-valve H′ which, in practice, allows the cold water free access to the boiler from pipe F, but prevents the discharge thereof from said boiler through said pipe. A shut-off valve J is also arranged in the horizontal piping between the pipes G B and H C, whereby the cold water supply from pipe F may be shut off wholly or in part from passing into and mixing with the hot water in said pipes G B, and between said shut-off valve and the hot water pipes is arranged a suitable automatic, steam valve or governor K, for regulating the steam pressure in the boiler.

By the foregoing construction and arrangement, it is obvious that cold water may be supplied direct to the boiler; the basin or other fixture, and also to the hot water pipe to mix therewith in greater or less quantity, as desired; and therefore hot water may be supplied to said fixture through the hot water pipes, of any degree of temperature desired, from the hottest water, (by entirely closing the valve J,) to luke-warm water, or any temperature between the two, according to the amount of cold water allowed to pass through into the hot water pipes. In this instance I have shown a threaded bib-cock L at the juncture of the vertical hot water, and horizontal piping, for drawing water into a pail or other receptacle, or for connecting a hose therewith if so desired for any purpose, but I do not limit myself to the use thereof.

The part marked M is an ordinary pipe coupler used for convenience in putting the parts together in making the heater. The same may be used or not as preferred.

In practice the boiler of my improved heater is made from a section of cast metal pipe, threaded at the ends, and threaded caps are screwed onto said ends to close the same, steam-tight.

As the boiler is ordinarily the most expensive part of the construction of heaters of this class, it will be apparent that I am thus enabled to materially lessen the cost of manufacture, and at the same time produce a heater of superior quality.

It will, of course, be understood that I do not limit myself to any special kind of burner, to the position thereof, or to the fuel used for heating the water in boiler D, but being aware that water heaters of a similar nature are patented and in use, I do, however, limit myself to the general construction and arrangement herein set forth and pointed out in the claim.

Having now described said invention, what I claim as new and desire to secure by Letters Patent is;

The combination with the hot and cold water pipes B C respectively, of a basin, sink, or other plumbing fixture; of a water-heater consisting of the horizontal boiler D, the burner E preferably arranged under the same; the hot and cold water pipes G. H. extending up from the ends of the boiler with a check-valve in the cold water pipe, and each connecting with the horizontal piping I, as well as with the pipes B C at their respective ends of the heater, and the supply pipe F with the cold water piping; said piping I and F; the shut-off valve J in piping I between the aforesaid hot and cold water pipes, and the automatic steam valve or governor K combined with the hot water piping, substantially as and for the purpose set forth.

JOSEPH H. MESSIER.

Witnesses:
A. A. BARKER,
W. B. NOURSE.