(No Model.)

J. McGINLEY.

WATER BACK AND BOILER FITTING FOR RANGES.

No. 289,847. Patented Dec. 11, 1883.

Fig. 2.

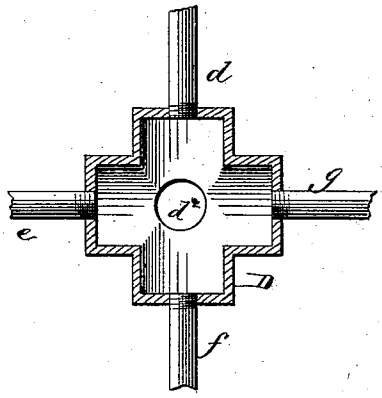
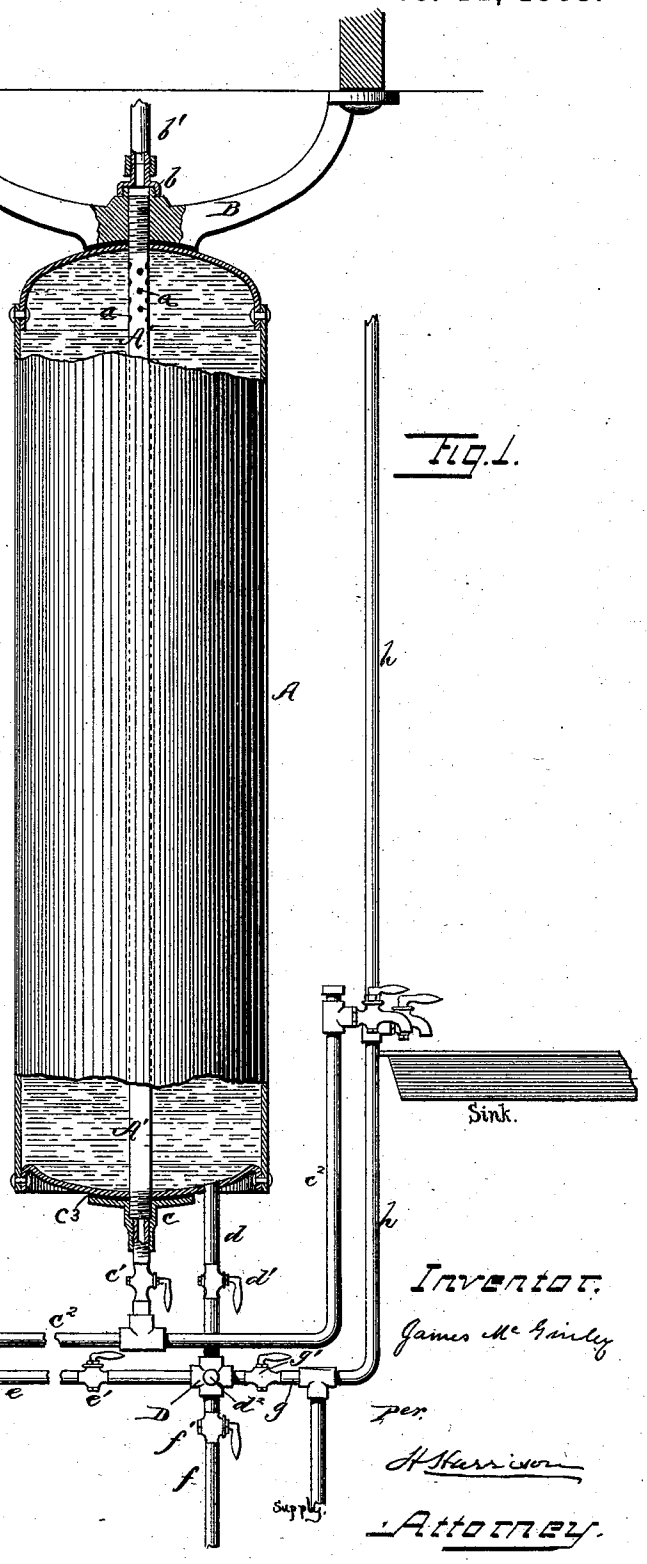


Fig. 1.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES McGINLEY, OF CHICAGO, ILLINOIS.

WATER-BACK AND BOILER FITTING FOR RANGES.

SPECIFICATION forming part of Letters Patent No. 289,847, dated December 11, 1883.

Application filed February 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES McGINLEY, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Fitting Water-Backs and Boilers to Ranges, of which the following is a specification, to wit:

My invention relates to an improvement in water-back and boiler fittings for ranges; and it consists in certain peculiarities of construction and arrangement, whereby the freezing of the water in the water-back and consequent accidents may be prevented, and the cleaning of both water-back and boiler is facilitated, substantially as will be hereinafter more fully described.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a boiler and its connections; Fig. 2, a detail view of part of the fittings.

A represents a hot-water boiler—such as is commonly used in kitchens—which is provided with a central pipe, A′, of suitable size, and passing through both ends of the boiler, as represented in the drawings. This pipe is, near its upper end, within the shell of the boiler, provided with a number of perforations, *a a*, and the end of the pipe beyond the boiler is screwed into a yoke, B, provided with a central hole, *b*, which is capped by reducer *b′*, coupled to the hot-water pipe b^2, leading to the story above. The yoke B is secured to the joists of the floor above, and forms a secure and convenient mode of suspending the boiler. The central portion of the yoke is, by the screw-threaded pipe A′, drawn tightly against the end of the boiler, and rendered tight by the interposition of a soft lead washer. The lower end of the pipe A′ is also screw-threaded and provided with a flange, *c*, rendered tight by a lead washer, c^3, and to this flange *c* is connected, by a stop-cock, *c′*, a pipe, c^2, connecting the upper part of the water-back C with the kitchen-sink, as shown.

D represents a "cross," connected by a pipe, *d*, with the bottom of the boiler A, by a pipe, *e*, with the lower end of the water-back, by a pipe, *f*, with the waste or sewer pipe, and by a pipe, *g*, with the supply-pipe from the mains, which also connects by a pipe, *h*, with the sink, and extends upward to the floor above. These connecting-pipes are provided with stop-cocks, (marked, respectively, *d′*, *e′*, *f′*, and *g′*,) and the cross D is also provided with an opening, d^2, upon one side, closed by a suitable plug, in order to facilitate cleaning the pipes of sediment. By this arrangement it will be seen that when the pressure of water from the supply-pipe is on the boiler and water-back there will be a constant circulation from the boiler through the pipes *d* and *e*, water-back C, pipes c^2 and *c′*, and stand-pipe A′ and its perforations *a a*, back to the boiler again, the cock *f′* in the waste-pipe being normally closed.

If water is to be used at the sink, its course will be from the supply through the pipes *g e*, water-back C, and pipe c^2 to the sink, being heated as it flows, and not drawing off any of the warm water in the boiler. If it is used upstairs, it will pass from the supply to the water-back, as before described, and thence through the large pipe A′ directly to the bath.

Should it be desired to draw the water from the water-back at night, to prevent freezing, it may be done by simply closing the cocks *c′ d′ g′* and opening *f′*, which will close the supply, draw off the water from the water-back, and retain it in the boiler; or, if desired to empty the boiler, also, one or both of the cocks *c′ d′* may be left open. The sediment may be drawn from the water-back and boiler in the same manner, and a constant stream be passed through to cleanse them by letting the supply and waste remain open at the same time. Should the sediment collect in the pipes too hard to be washed out, the water may be drawn off, as described, and a wire inserted through the opening d^2 of the cross D, and after loosening the dirt it may be easily washed out by a current of water.

The mode of suspending the boiler described is very convenient, and leaves the space beneath the boiler free for sweeping, while the connections may be tightened at both ends of the boiler at any time, should they leak, by simply screwing up the flange *c*. This ar-

rangement of pipes and cocks also enables a workman to repair portions of the connections without cutting the water entirely off.

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

1. The combination of a hot-water boiler having a central pipe extending through the boiler from end to end, and having perforations near its upper end, and a connection at its lower end with the water-back, and a connection at its upper end with the pipe leading to the floor above, substantially as and for the purpose set forth.

2. The combination, with a hot-water boiler having a central pipe extending through the boiler from end to end, and provided with a screw-flange upon its lower end, of a yoke adapted to be secured to the beams of the floor above, and having a central opening for the reception of the upper end of the central pipe, whereby the boiler is suspended, substantially as shown and described.

3. The combination, with a hot-water boiler and its connecting-pipes *d e f g* and their stop-cocks, of a box or cross, D, arranged in these pipes, and provided with a removable plug, whereby the sediment may be loosened by the insertion of an instrument, substantially as described and shown.

4. The hot-water boiler A, having the central pipe, A′, perforated near its upper end, and provided with a flange, *c*, on the lower end, and secured in a suspending-yoke, B, at the upper, in combination with the water-back C, hot-water pipe c^2, and cock c', the cross D, with its connections *d e f g*, each having a stop-cock, and the supply-pipe from the mains, all constructed and arranged to operate substantially as and for the purpose set forth.

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

JAMES McGINLEY.

Witnesses:
J. E. STEVENSON,
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