(No Model.)

A. P. CREQUE.

FITTING FOR WATER HEATING APPARATUS.

No. 379,269. Patented Mar. 13, 1888.

Fig: 2.

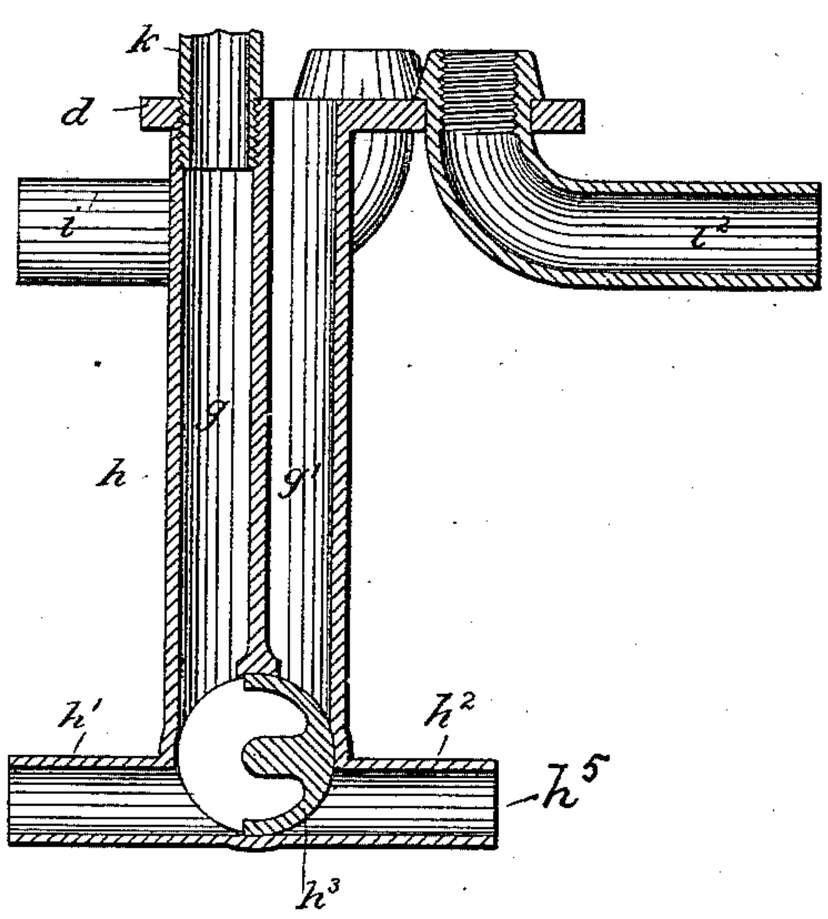


Fig: 1.

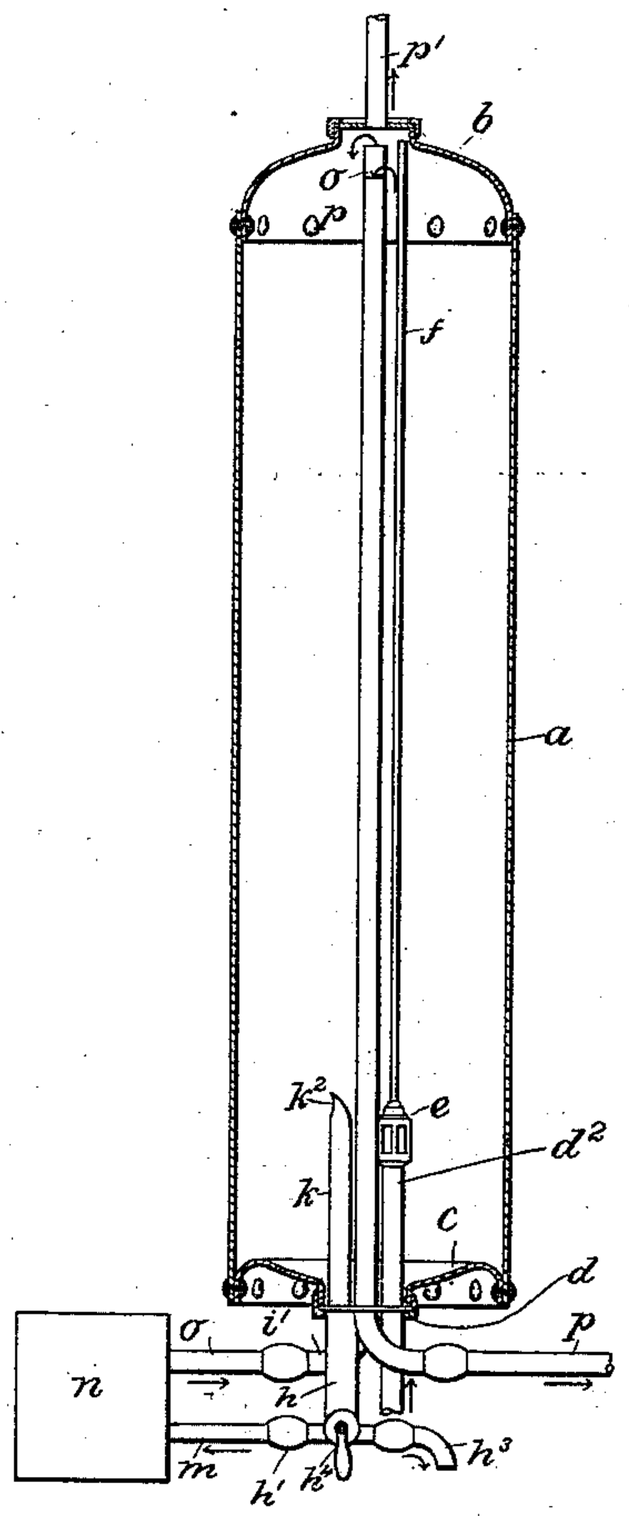
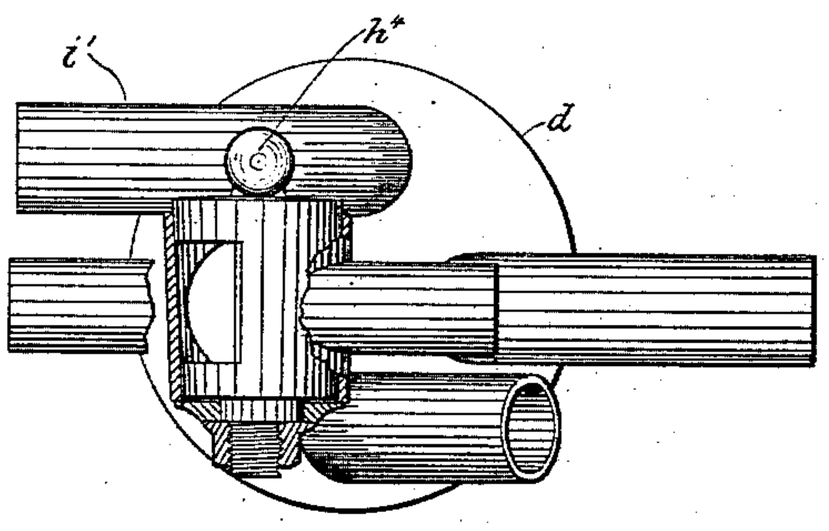


Fig: 3.



Witnesses.
John F. Nelson.
John F. C. Printkerh.

Inventor.
Allen P. Creque,
by Crosby & Gregory. Attys.

UNITED STATES PATENT OFFICE.

ALLEN P. CREQUE, OF NEW YORK, N. Y.

FITTING FOR WATER-HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 379,269, dated March 13, 1888.

Application filed January 2, 1885. Serial No. 151,764. (No model.)

To all whom it may concern:

Be it known that I, ALLEN P. CREQUE, of New York city, county, and State, have invented an Improvement in Fittings for Water-Heating Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a pipe-fitting or multi-passage cover provided with pipe-connections and a controlling-cock to be used in connection with water-heating apparatus, such as are usually employed in connection with stoves or ranges for heating and circulating water for domestic or other purposes.

The fitting forming the subject of the present invention is adapted to be connected with the boiler or hot-water reservoir, and contains two independent passages leading from the interior of the said reservoir and terminating in two independent branches, one of which may be connected with the pipe or tube leading to the heater and the other of which may be connected with a discharge or sediment pipe, the said passages and branches being combined with a cock located at the junction thereof, by which the said waste or sediment passage may be closed and the reservoir placed in connection with the heater, or by placing the said cock in another position communication with the heater may be cut off and the interior of the reservoir be connected with the sediment-pipe for the purpose of discharging the sediment from the reservoir, or by placing the said cock in a third position communication may be cut off from the reservoir and connection made between the heater and the waste-passage for the purpose of removing sediment and withdrawing the water from the said heater.

Figure 1 is a vertical section of a reservoir and connected appliances embodying this invention, the multi-passage cover and pipes and tubes being in elevation; Fig. 2, a longitudinal section of the cover and pipes connecting the reservoir with the heater and sediment-pipe; and Fig. 3, an under side view of the said cover and pipes, parts of the branches being broken out to show the stop-cock.

The reservoir *a* is provided with top and bottom plates, *b c*, having large openings for the reception of multi-passage covers *d*—such as described in my application, Serial No. 151,762—having suitable tubular projections to which the various pipes to be used in connection with the said reservoir will be joined in the usual manner.

The cold-water-inlet pipe d^2 is provided with a controlling-valve, *e*, having a vent-pipe, *f*, extended to the upper portion of the reservoir. As shown in this instance, it is substantially the same as in another application filed herewith, Serial No. 151,763, wherein the same is more fully described and claimed. The devices herein shown, and common to the said application, are not herein claimed.

The water is caused to circulate from the reservoir through a passage, *g*, in a compound fitting, *h*, shown in this instance as forming an integral part of the multi-passage cover *d*, having connected or cast with its other branch tubular projections i' i^2, &c., adapted to be joined with other pipes passing into the lower end of the reservoir.

The fitting *h* has at its lower end a branch, h', on the same side as the passage *g*, and it also contains another passage, g', and branch h^2, and is provided with a cock, h^3, at the junction of the said passages.

The passage *g* for the circulation of water preferably has, as a continuation of it, a short pipe, *k*, extending up into the reservoir a short distance, as shown in Fig. 1, and preferably provided with a lateral mouth, k^2, into which the water is received from a point above the sediment which accumulates in the lower portion of the reservoir.

In the operation of the water-heating apparatus the cock h^3, which is provided with a handle, h^4, (see Fig. 1,) is normally in the position shown in Figs. 1 and 2, closing the lower end of the sediment-passage g' and the branch h^2, and connecting the passage *g* with the branch h', which latter is joined by a pipe, *m*, with the heater, (indicated at *n*, Fig. 1,) in which the water is heated and caused to rise, and from which the heated water is delivered through a circulating-pipe, *o*, leading to the upper end of the reservoir, the pipe being shown in this instance as entering through the cover *d* at the lower end of the said reservoir by means of the elbow or passage i', which connects por-

tions of the pipe *o* within and outside the reservoir.

The heated water may be withdrawn from the reservoir through the pipe *p'*, leading from its upper end, or through the pipe *p*, leading from the upper end of the reservoir down through the interior thereof and passing out through the cover *d* at the lower end of the reservoir.

The sediment-passage *g'* opens directly from the cover *d* at the lowest point in the reservoir, and it will be seen that by turning the cock h^3 half around the passage *g* and branch *h'* will be closed and the passage *g'* connected with the branch h^2, which is provided with an orifice, h^5, (see Fig. 1,) or is connected with a waste-pipe, so that the water may be drawn directly from the reservoir, carrying with it the sediment which may have accumulated near the bottom thereof, thus cleaning the reservoir of sediment.

By turning the cock h^3 one-quarter of a turn in the direction of the arrow indicated thereon both passages *g g'* will be closed at their lower ends and the branches *h' h²* be connected, so that the water may flow through the circulating-pipes *o m* and the heater, escaping at the orifice h^5, thus removing sediment from the heater; or by closing the inlet-pipe d^2 and admitting air to the reservoir through one of the pipes *p* or *p'* the water may be withdrawn from the hot-water-delivery pipe *p'* and from the circulating-pipes *o m* and the heater *n*, leaving the body of the reservoir filled with water, thus protecting the hot-water-delivery pipe *p'*, the heater, and circulating-pipes from danger of bursting by allowing water to freeze in them, and that without withdrawing the water from the reservoir.

It will be seen that the passages *g g'* and branches *h' h²* are similar to one another, so that if the reservoir is to be placed at the other side of the heater, as is sometimes necessary, the pipe *k* may be screwed into the passage *g'* and the branch h^2 connected with the pipe *m*, and the branch *h'* used as a waste or discharge passage, and the handle h^4 of the cock will still remain at the front, where it may be readily operated.

The compound fitting *h* need not necessarily form a part of the cover *d*, but is complete in itself, and may be connected with the reservoir in any suitable manner, as by soldering or screw-threads, or as an independent coupling device.

I claim—

1. The boiler or reservoir fitting composed of the pipe *h*, having independent passages *g g'* and two branches, *h' h²*, substantially at a right angle to the pipe *h*, and of the cock h^3, located at the junction of the passages *g g'* with the branches *h' h²*, substantially as described.

2. The combination, with a heater and a range boiler or reservoir, of a cover having an attached pipe provided with two independent passages, *g g'*, and having two branches, *h' h²*, and the cock h^3, intersecting the passages *g g'* and the branches *h' h²*, change of position of the cock h^3 permitting the discharge of sediment or water from the boiler or the withdrawal of the sediment or water from the heater, substantially as described.

3. The combination of a range-boiler or hot-water reservoir, heater, and circulating pipes or ducts connecting the same, with a fitting having a passage, *g*, and branch *h'*, constituting a part of the circulating-duct, and a discharge or sediment branch, h^2, and the cock h^3, controlling the said passage and branches, whereby communication may be cut off between the lower portion of the reservoir and circulating-pipes, and the latter connected with the discharge branch for the withdrawal of the contents of the circulating-pipes and heater without emptying the reservoir, substantially as described.

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

ALLEN P. CREQUE.

Witnesses:

G. W. GREGORY,

JOS. P. LIVERMORE.