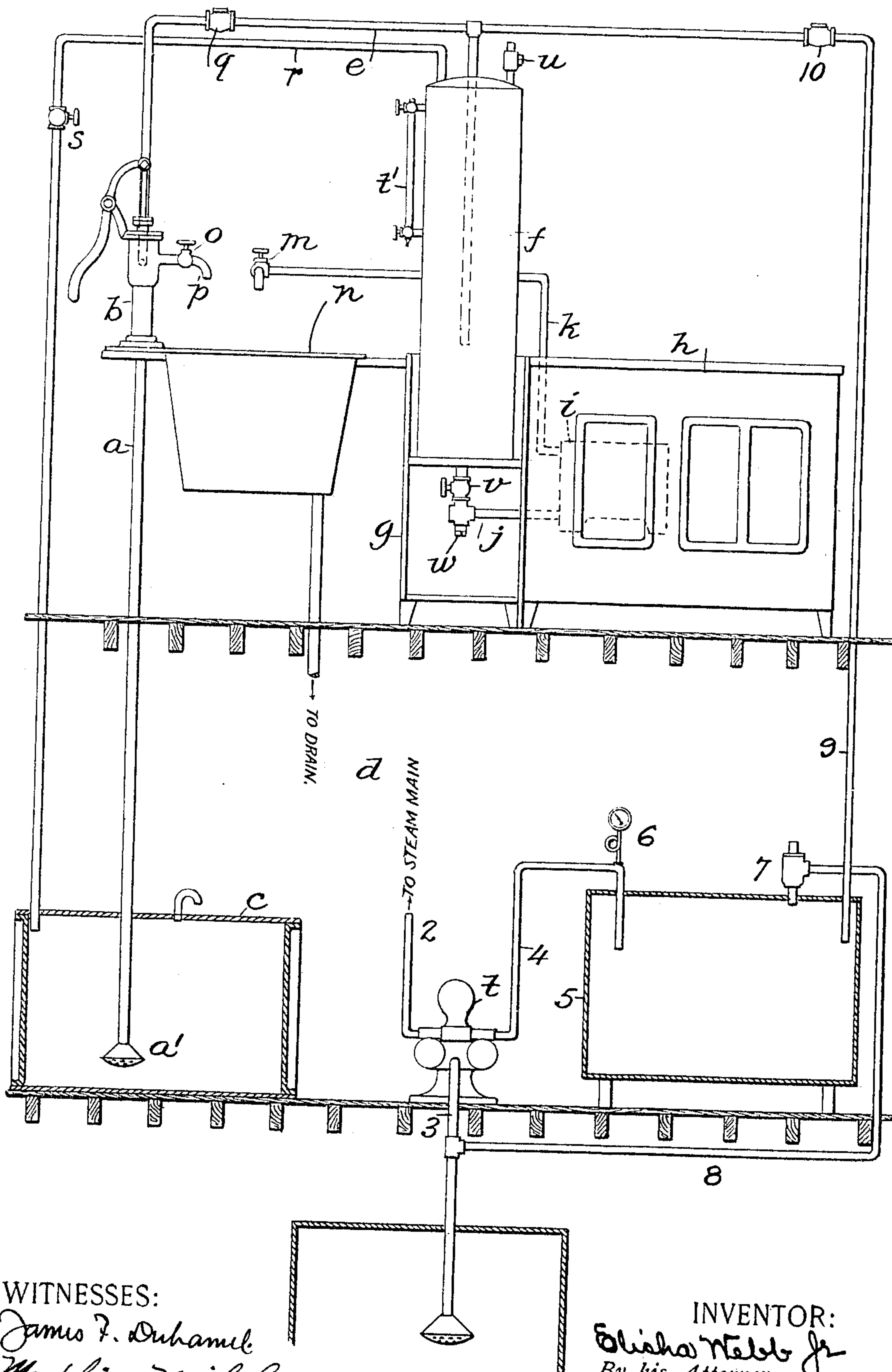


No. 819,103.

PATENTED MAY 1, 1906.

E. WEBB, JR.
GALLEY HOT WATER SYSTEM.
APPLICATION FILED AUG. 28, 1905.



UNITED STATES PATENT OFFICE.

ELISHA WEBB, JR., OF PHILADELPHIA, PENNSYLVANIA.

GALLEY HOT-WATER SYSTEM.

No. 819,103.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed August 28, 1905. Serial No. 276,059.

To all whom it may concern:

Be it known that I, ELISHA WEBB, Jr., a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Galley Hot-Water Systems, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to improvements in means for supplying hot water to all parts of sea-going vessels, river-boats, sailing craft, and the like; and the object of my invention is to provide a hot-water system by means of which hot water may be supplied readily and effectively to any desired part of the vessel for bath, culinary, or other purposes.

Briefly described, the water-service is obtained by the use of a specially-constructed hand-pump or of a steam-pump, in connection with an available storage-tank, from which the supply for the circulating hot-water boiler is taken, said boiler being connected to a water-back in the fire-box of the galley-range. The hot and cold water supply lines are piped up to such places as require the water-service.

In the drawing illustrating the principle of my invention and the best mode now known to me of applying that principle the figure shows in diagrammatic view the parts of a galley hot-water system.

The suction-pipe *a* of the combination suction and force hand-pump *b* leads to the fresh-water storage-tank *c* in the hold *d*, where it is provided with a foot-valve strainer *a'*, while its discharge-pipe *e* leads to the top of the circulating hot-water boiler *f*, which is supported upon a shelf in the coal-box *g*, located (as it may be) at either end of the galley-range *h*. In the fire-box of the latter is a water-back *i*, with the bottom of which the bottom of the boiler *f* is connected by the pipe *j* and with the top of which the said boiler is connected by a pipe *k*. Instead of being in the hold *d* the storage-tank *c* may be placed in any other convenient and suitable part of the vessel.

By coming in contact with the heated surfaces of the water-back *i* the water from the boiler *f* becomes heated and returns to the boiler through the pipe *k*, and the hot-water supply is delivered from a connection in the side of the boiler *f* directly opposite the return *k* and is piped up to the outlets as desired, as to the faucet *m* over the galley-sink *n*.

The pump *b* has an additional outlet to the

sink *n*, which consists of a compression bibcock *o*, located in the spout *p* of the pump *b*. The discharge-pipe *e* is provided with a check-valve *q*, which prevents the hot water from backing up into the water-chamber of the pump *b*.

A vent-pipe *r* is run from an outlet in the top of the boiler *f* to the fresh-water storage-tank *c* for the purpose of venting the boiler and condensing the vapors accumulating therein. This vent-pipe *r* is provided with a valve *s*, which should be closed when the pressure-pump *t* (hereinafter more particularly referred to) is in operation.

The boiler *f* is provided with a gage-glass *t'*, a relief-valve *u*, and a valve *v*, controlling the outlet-pipe *j* from the boiler. To drain the boiler, the valve *v* is opened and the plug *w* is withdrawn.

To combine with the above-described gravity circulating system a pressure-controlled system, the following means are provided: The steam or pressure pump *t* is connected by the pipe 2 with the steam-main, by the suction-pipe 3 with the ship's main fresh-water tanks, and by the discharge-pipe 4 with the pressure-tank 5, fitted with a pressure-gage 6 and with a relief-valve 7, from which leads a pipe 8 to the suction-pipe 3. From the pressure-tank 5 leads a discharge-pipe 9 to the boiler *f*, and this pipe 9 is provided with a check-valve 10, which prevents water from flowing back to the pressure-tank 5. Furthermore, the pipe 9 is connected up to such other fresh-water discharges as may be deemed desirable.

What I claim is—

1. In a hot-water system for use on ship-board, the combination of a fresh-water storage-tank; a combination suction and force hand-pump connected therewith; a circulating hot-water boiler; means connecting said hand-pump and boiler; automatic devices located in said means for preventing the back-flow of hot water from said boiler to said pump; a coal-box located beneath and supporting said boiler; a galley-range connected by inflow and outflow pipes with said boiler; a galley-sink; means for conducting hot water from said boiler to said galley-sink; an outlet from said pump to said galley-sink; and a vent-pipe connecting the top of said boiler with said storage-tank.

2. In a hot-water system for use on ship-board, the combination with water-heating devices, of a circulating hot-water boiler;

means for distributing hot water from said boiler; a storage-tank; a pump connected with said storage-tank; means connecting said pump with the top of said boiler, said means
5 being provided with automatic devices for preventing the backflow of water from said boiler to said pump; and a vent-pipe connect-

ing the top of said boiler with said storage-tank.

ELISHA WEBB, JR.

Witnesses:

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