

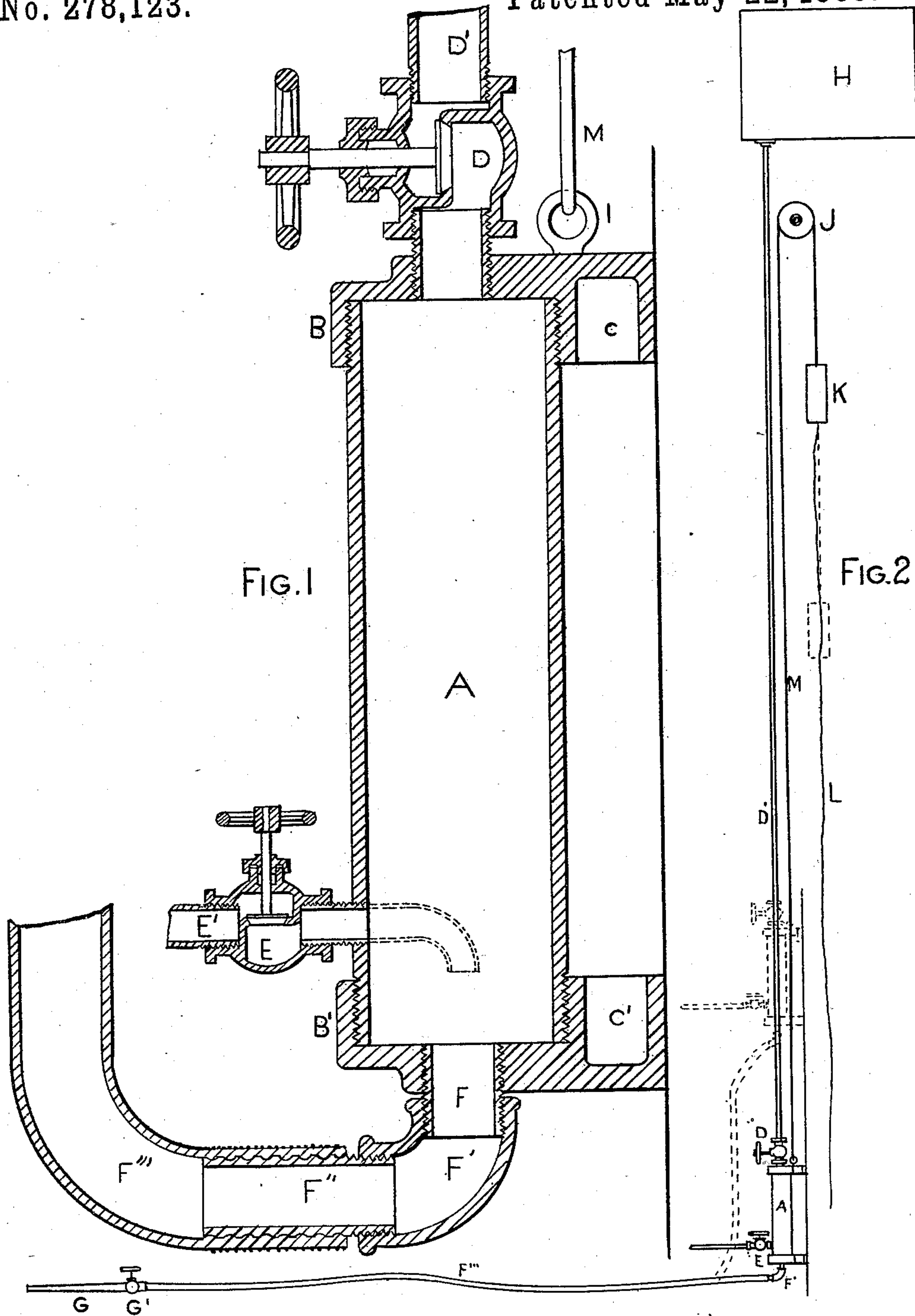
(No Model.)

H. A. GANTERT.

WATER HEATER.

No. 278,123.

Patented May 22, 1883.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

HERMANN A. GANTERT, OF SAN FRANCISCO, CALIFORNIA.

WATER-HEATER.

SPECIFICATION forming part of Letters Patent No. 278,123, dated May 22, 1883.

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

To all whom it may concern:

Be it known that I, HERMANN A. GANTERT, a citizen of the United States, and resident of San Francisco, State of California, have invented a new and improved apparatus for supplying hot or cold water from a single nozzle, particularly designed for the use of brewers in washing and cleansing beer-barrels, of which the following is a specification.

The object of the invention is to dispense with the more expensive forms of heating apparatus at present in use, and to provide the operator with a convenient means of immediately regulating the supply of water, and its temperature from cold to boiling-point.

In the accompanying drawings, Figure 1 is a sectional elevation of my device in detail. Fig. 2 is an elevation, showing my device in connection with both supply and discharge pipes and supply-tank.

In both figures the same letters refer to the same parts.

A is a short metal tube—say a foot and a half long and of about three inches interior diameter. B is a metal cap screwed upon its upper end to close it, and B' is a similar cap performing the same service for the lower end. Each of these caps may have a flange, C C', through which wood-screws may be passed to fasten the apparatus to any convenient wall or timber support.

D is a valve to regulate the quantity of cold water admitted through pipe D' into the tube A, and E is a valve to regulate the quantity of steam admitted through pipe E'.

F is the discharge-pipe, shown in the drawings to consist of the nipple F, elbow F', hose-nipple F'', and hose F'''.

G is a metal nozzle, provided with stop-cock G'.

H is a tank to contain the stored water.

The pipe E' leads from a steam-generator. The pipe which enters the tube A to admit the steam may be either at the bottom or at the top, and it may be best to project it into the center of the tube and let it curve downward to project the steam in the direction in which the water flows. (See dotted lines, Fig. 1.) It is immaterial as to the production of some effect what the relative steam and water pressure is, but the best effect will be

produced when the steam-pressure is the greater. It is better, therefore, that the apparatus should be arranged so that the valve E will not be so far below the level of the water in the tank as to give a water-pressure exceeding the steam-pressure. Therefore, in cases where the steam-pressure is irregular, and which may often be quite low, the pipes D' and E' are made of rubber and long enough so that the tube A may be raised to reduce the water-pressure above the steam-entrance. (See dotted lines, Fig. 2.) To permit this an eyebolt, I, is provided in the upper cap, B, to which a rope, M, is attached. This rope passes up to a point nearly as high as the tank, and over a pulley, J, to suspend a counter-weight, K, of such proportionate weight as to nearly balance the opposing weight of all the parts. A cord, L, may be attached underneath to the counter-weight to pull it down, and thus raise the tube and its connections. If a pressure of steam of only, say, ten pounds can be had, the apparatus is raised until the water-pressure is reduced to about eight pounds, or, in other words, the level of the water-supply is fifteen to twenty feet above the valve E'. Of course the water-pressure at the nozzle G will not be affected by raising and lowering the tube A, for the level of the nozzle will be constant.

By adjusting the openings of the steam and water valves various degrees of temperature and flow of water may be obtained. By raising or lowering the tube A the high or low pressure of the steam may be provided for.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. The water-heater herein described, consisting of the tube A, into which water under pressure is admitted by the valve D to flow out through the passage-way F, while steam is admitted into said tube through valve E to heat the said water.

2. The water-heater as above claimed, in combination with a raising and lowering device to adjust the water-pressure with relation to the pressure of the steam available, substantially as described.

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Witnesses:

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