(No Model.)

P. WEIDMANN.

BARREL HEATER.

No. 282,814. Patented Aug. 7, 1883.

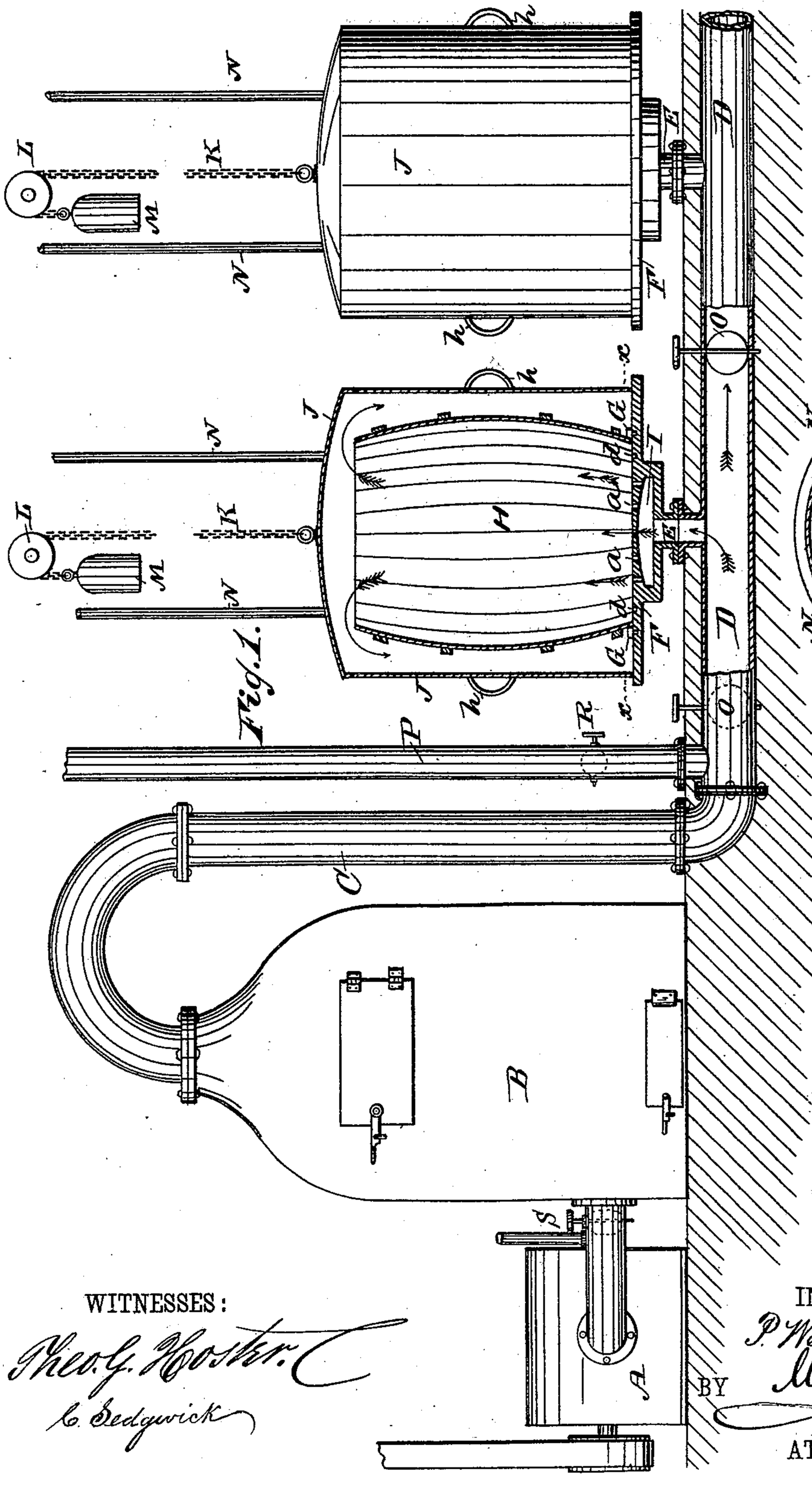

Fig. 1.

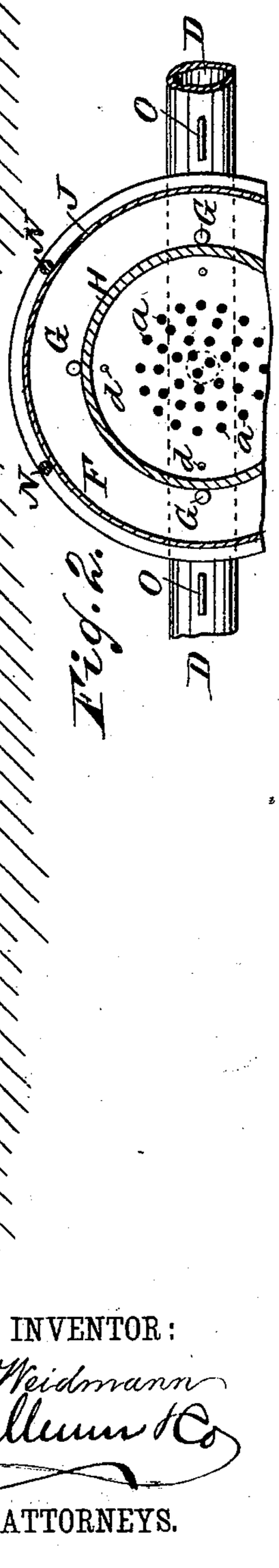

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

PAUL WEIDMANN, OF BROOKLYN, NEW YORK.

BARREL-HEATER.

SPECIFICATION forming part of Letters Patent No. 282,814, dated August 7, 1883.

Application filed March 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, PAUL WEIDMANN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Method of and Apparatus for Heating Barrels, of which the following is a full, clear, and exact description.

All barrels must be thoroughly heated after they have been set up in truss-hoops for the purpose of causing the staves to retain their curvature, so that they will not straighten out as soon as the hoops are removed from the barrel.

The invention consists in an apparatus for heating barrels, constructed with air-heating devices and a series of receptacles adapted to receive the barrels, into which receptacles hot air is conducted.

The invention also consists in various details and parts of construction, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal elevation of my improved apparatus for heating barrels, parts being shown in section. Fig. 2 is a sectional view of a part of the apparatus.

By means of a blower, A, of any suitable construction, air is forced through an air-heating apparatus or stove, B, which is provided with an outlet-pipe, C, for the heated air. The pipe C conducts the heated air into a horizontal pipe, D, from which a series of short pipes, E, project upward, on the upper ends of which horizontal plates F are fastened, in each of which a flat cavity, I, is formed, the top of which is arched or concaved, into which cavity the hot air is conducted by the short pipes E. The middle of the plate F, forming the top of the cavity, is provided with a series of small apertures, *a*, through which the heat can pass. The upper surface of the plate F is provided with a series of recesses, *d*, into which removable studs or pins G can be placed, which form a square or other figure, within which the lower end of a barrel, H, is placed. The studs are adjusted according to the bottom diameter of the barrel, and hold the same in the proper position on the plate F. A cylindrical hood or drum, J, open at the bottom, closed at the top, and provided with handles *h*, is suspended from one end of a chain, K, passing over a suitable pulley, L, from the other end of which chain K a weight, M, for counterbalancing the hood, is suspended. The hood rests against two vertical guide-rods, N. The plates F are suitably spaced, and between each two plates F and between the stove and the first plate F a valve, O, of some suitable construction, is provided in the pipe D. A pipe, P, provided with a damper-valve, R, projects upward from the pipe D between the first valve O and the stove. I find that the hot air is distributed better in the hood if it issues from a cavity, I, having an arched top than from a cavity having a flat top.

The operation is as follows: the hoods are raised, barrels are placed on the plates F, the hoods are lowered on the plates, and the hot air, which passes into the barrel and hood and circulates around and in the barrel, thoroughly heats the same on the in and out side in a very short time. After a barrel has been heated it is removed and replaced by another. If only a certain number of hoods are to be used, the valve O beyond the last hood in use is closed, to avoid a loss and waste of heated air. If the air passing into the tube D is too hot, the first valve is closed tightly, and the valve R of the pipe P is opened to let part of the heated air pass off through the pipe P. The pipe leading from the blower to the stove can be furnished with a valve, S, for controlling the quantity of air admitted into the stove.

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

1. A barrel-heating apparatus constructed substantially as herein shown and described, and consisting of an air-heating device, combined with removable receptacles for holding the barrels while they are being heated, into which receptacles hot air is conducted, as set forth.

2. In a barrel-heating apparatus, the combination, with an air-heating device, of apertured plates for supporting the barrels, and removable hoods or drums to be placed over the barrels while they are being heated, substantially as herein shown and described, and for the purpose set forth.

3. In a barrel-heating apparatus, the combination, with an air-heating device, of the pipe D, the plates F, the hoods J, the chains K, the pulleys L, and the weights M, substantially as herein shown and described, and for the purpose set forth.

4. In a barrel-heating apparatus, the combination, with an air-heating device, of the pipe D, the plates F, having perforations *a* and cavities I, provided with arched or concaved tops, and of the hood J, substantially as herein shown and described, and for the purpose set forth.

5. In a barrel-heating apparatus, the combination, with an air-heating device, of the pipe D, the plates F, the hoods J, and the valve O in the pipe D, substantially as herein shown and described, and for the purpose set forth.

6. In a barrel-heating apparatus, the combination, with an air-heating device, of the pipe D, the plates F, the hoods J, the valves O, the pipe P, and the valve R, substantially as herein shown and described, and for the purpose set forth.

PAUL WEIDMANN.

Witnesses:
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