

(No Model.)

H. W. PEASLEE.

FURNACE.

No. 300,635.

Patented June 17, 1884.

Fig. 1.

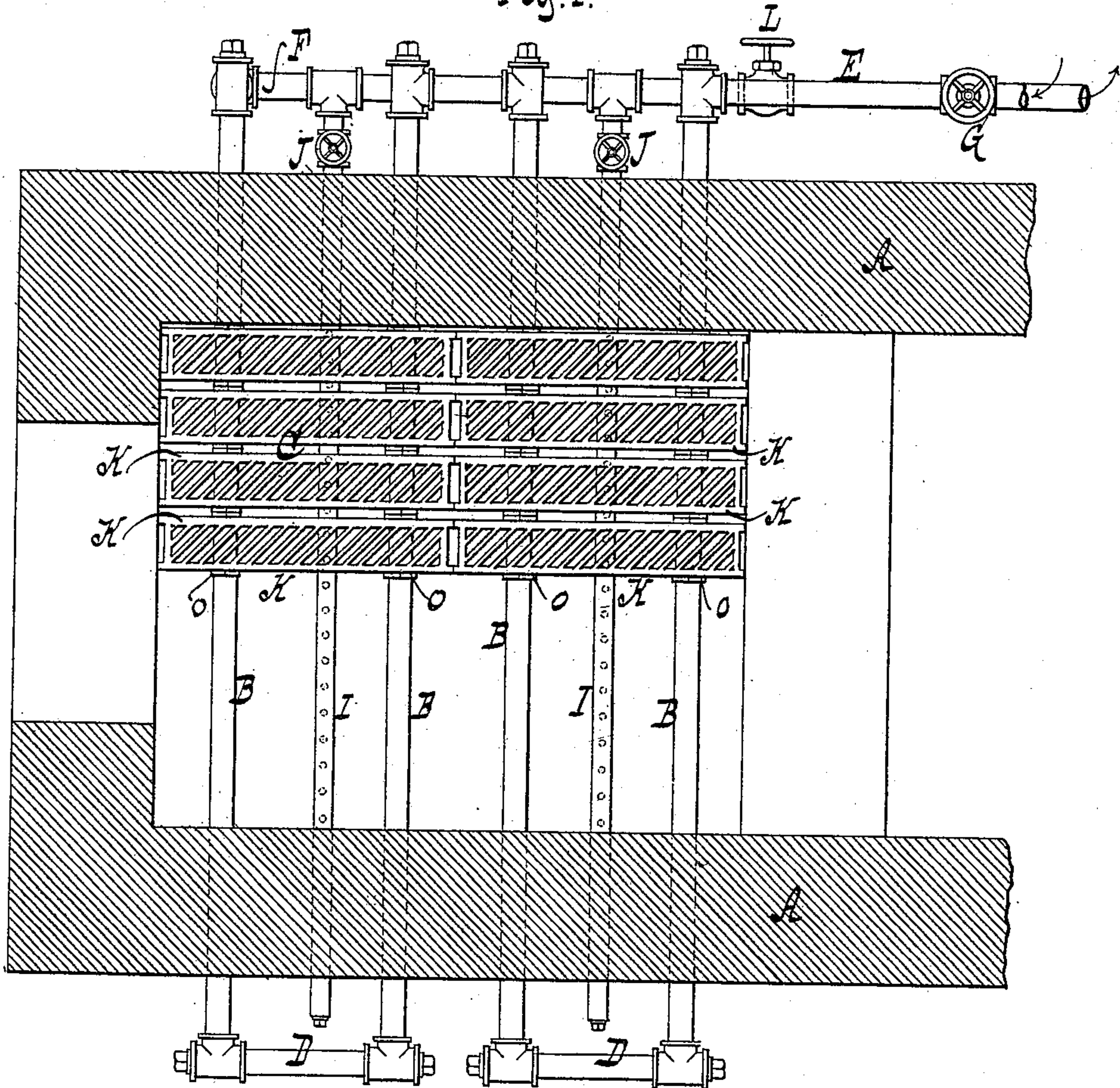
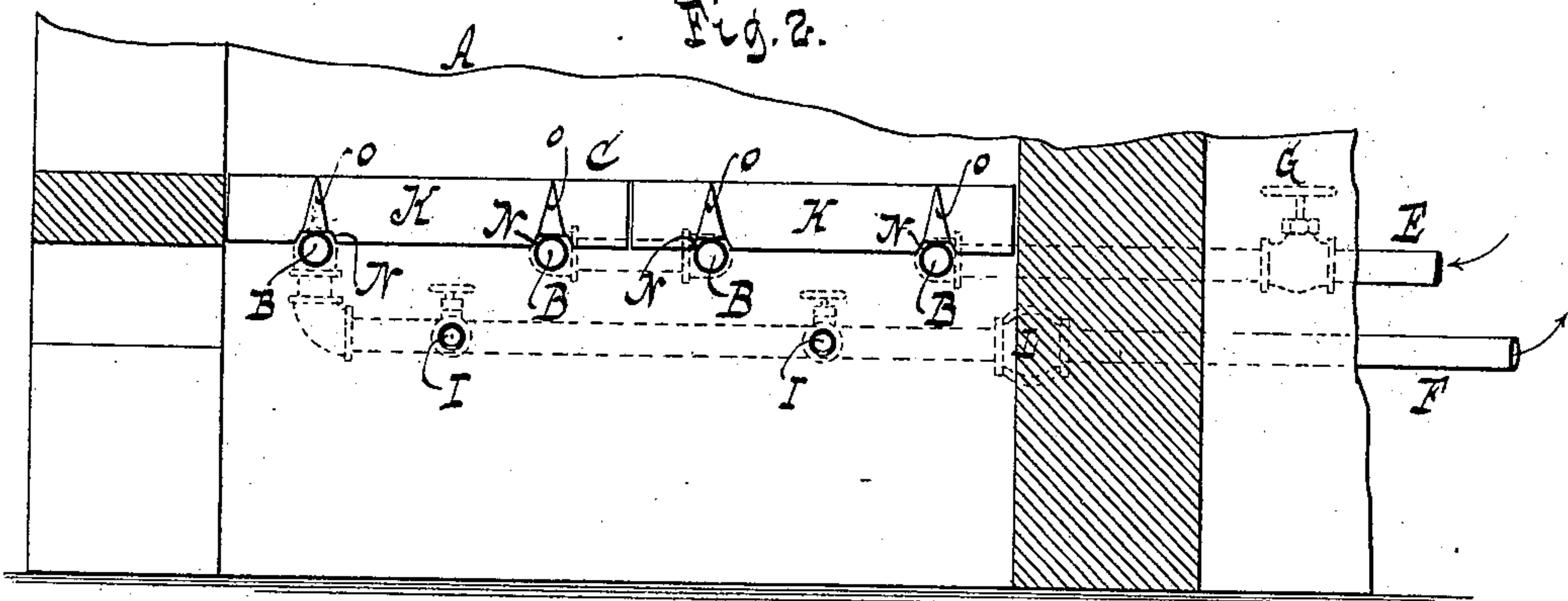


Fig. 2.



WITNESSES:

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HORACE W. PEASLEE, OF MALDEN BRIDGE, NEW YORK.

FURNACE.

SPECIFICATION forming part of Letters Patent No. 300,635, dated June 17, 1884.

Application filed April 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, HORACE W. PEASLEE, a citizen of the United States, residing at Malden Bridge, in the county of Columbia and State of New York, have invented new and useful Improvements in Furnaces, of which the following is a specification.

My invention is especially adapted to furnaces for steam-boilers or the like; and it consists in a certain novel means for cooling the fire-grate of such furnaces, and thereby protecting the grate-bars against destruction and for cooling the ash-pit, thereby keeping the air of the ash-pit at a low temperature, the whole being hereinafter fully described, and illustrated in the accompanying drawings, in which—

Figure 1 is a horizontal section of a furnace embodying my invention. Fig. 2 is a longitudinal section thereof.

Similar letters indicate corresponding parts.

The letter A designates the side walls of a furnace, supporting a series of pipes, B, which in turn support the fire-grate C, so that if these pipes are supplied with water the grate is kept cool by that means, which tends to prevent the grate-bars or sections from burning. For the purpose of supporting the grate the water-pipes B are arranged in a substantially horizontal plane at the proper place, and the pipes moreover are constructed with return-bends D, to communicate with each other alternately at the opposite ends, so that a continuous circulation of water may be maintained in the pipes, the water being supplied through a pipe, E, which is connected to the water-pipe at one end of the series, and discharging through a pipe, F, which is connected to the water-pipe at the other end of the series. The supply-pipe E receives cold water from a suitable source independently of the boiler, it being entirely disconnected therefrom, and in the pipe is arranged a stop-cock, G, for regulating the supply. From the discharge-pipe F, which is provided with a stop-cock, L, extend pipes I horizontally below the water-pipes and below the grate resting thereon, for discharging water in the form of a shower into the ash-pit. These pipes being perforated with holes opening downward or outward, and due to the cooling effect of the water thus introduced into the ash-pit, the air therein is kept at a low temperature, which

not only facilitates combustion but also assists in keeping the grate in a cool state.

One or more of the shower-pipes I may be used as circumstances may render expedient, and each is provided with a stop-cock, J, for regulating the discharge therefrom. The shower-pipes, moreover, may be used independently of the water-pipes B, they being in that event connected directly with the supply-pipe.

The bars of the fire-grate C are left detached from each other and each embodies in its structure two sides walls, K, which are provided with recesses N in the lower edge, to embrace the water-pipe B, so that the bars are held in position endwise by that means. The side walls, K, of each bar are also provided with lugs O, which diverge toward the lower edge and coincide with the recesses at that point, so as to rest on the pipes and present a surface of large area thereto, whereby the effect of the pipes is materially increased. Another function of the lugs O is to keep the grate-bars separated from each other, as shown in Fig. 1.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the supply-pipe for receiving cold water independently of a steam-boiler, a series of water-pipes supporting the fire-grate and alternately connected with each other at one end, a discharge-pipe connected with one of the series of water-pipes, and a shower pipe or pipes for receiving the discharge-water, substantially as described.

2. In a furnace for steam-boilers or the like, a series of water-pipes arranged to support the fire-grate and constructed to communicate with each other alternately at the opposite ends, in combination with a supply-pipe connected to the water-pipe at one end of the series, a discharge-pipe connected to the water-pipe at the other end of the series, and a shower pipe or pipes arranged to extend from the discharge-pipe horizontally below the water-pipes, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

HORACE W. PEASLEE. [L. S.]

Witnesses:

C. S. WHEELER,
J. B. RIDER.