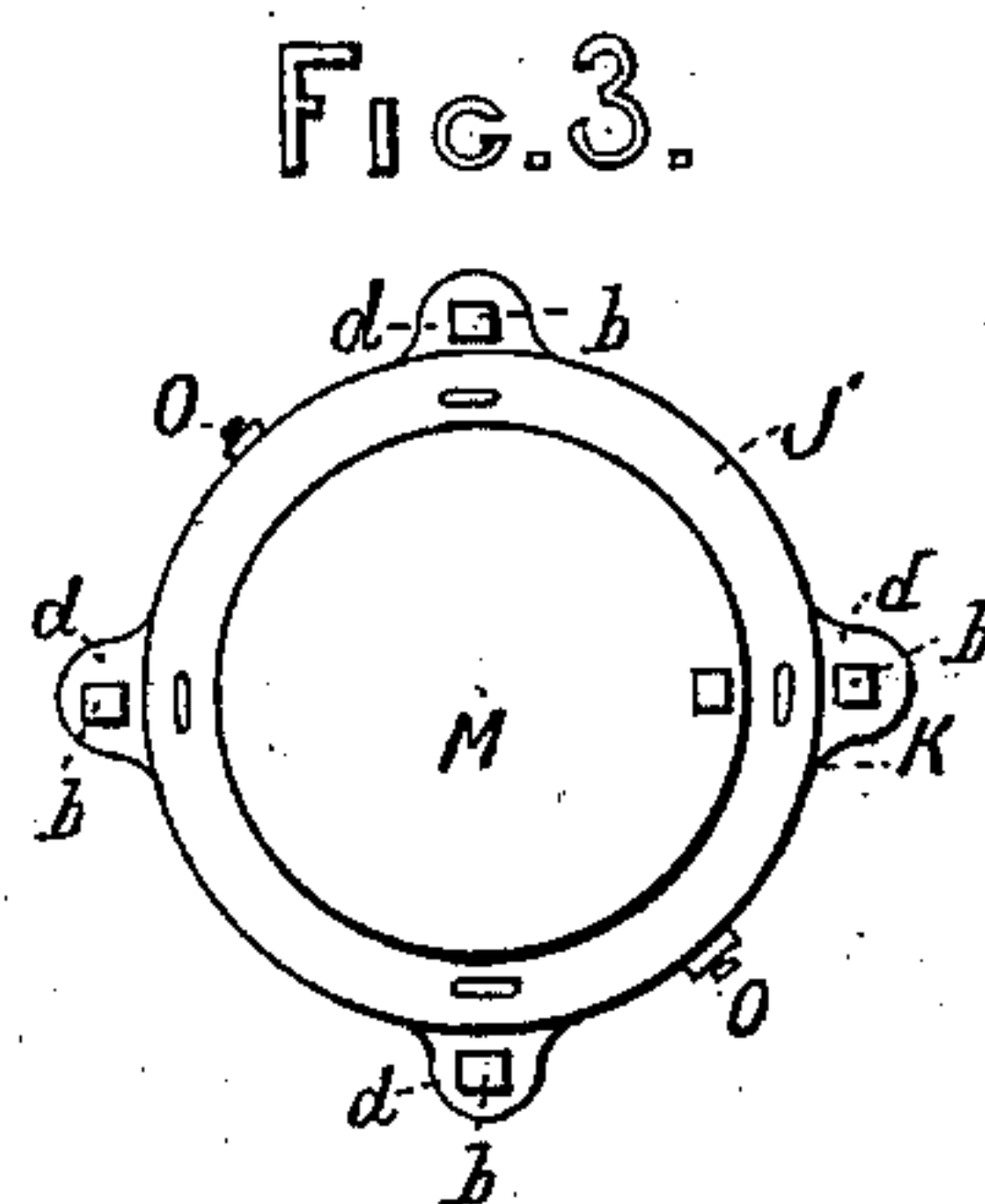
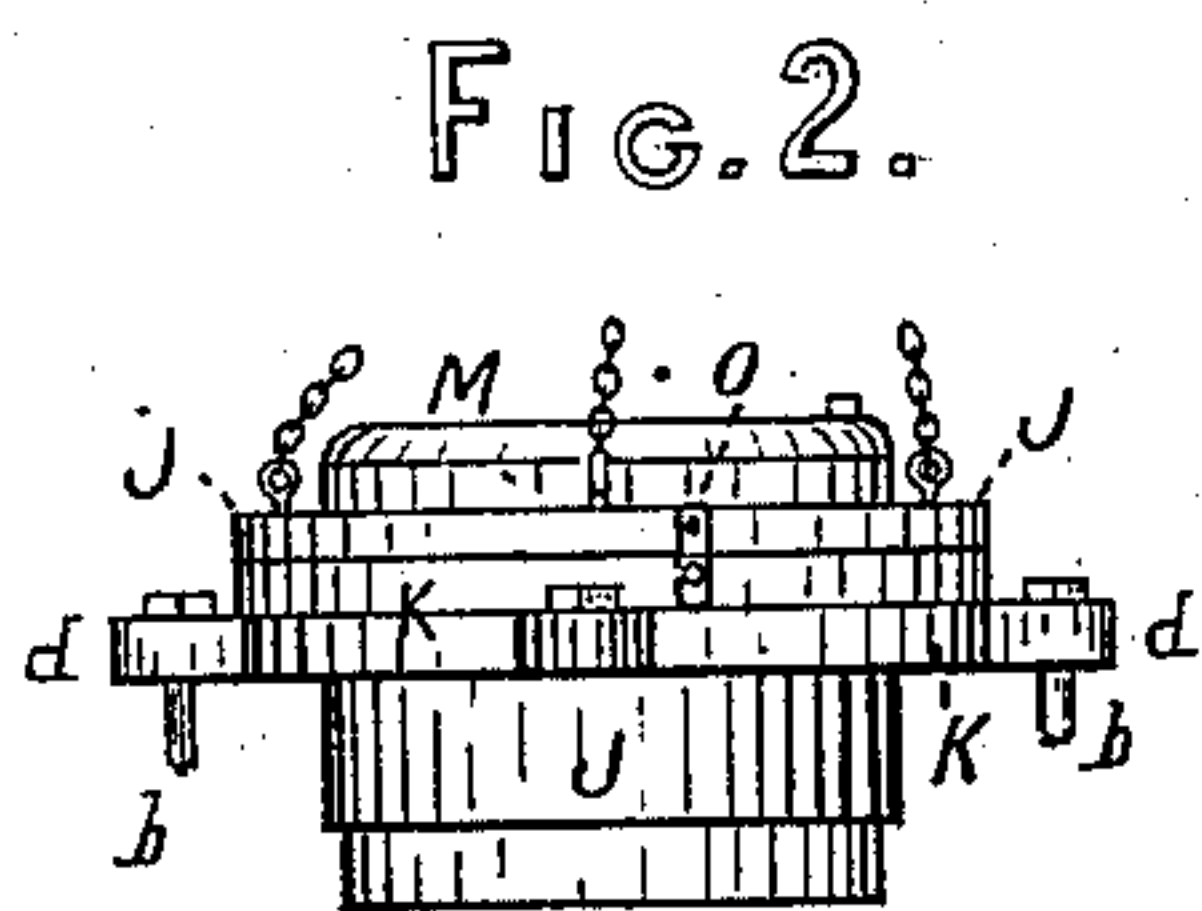
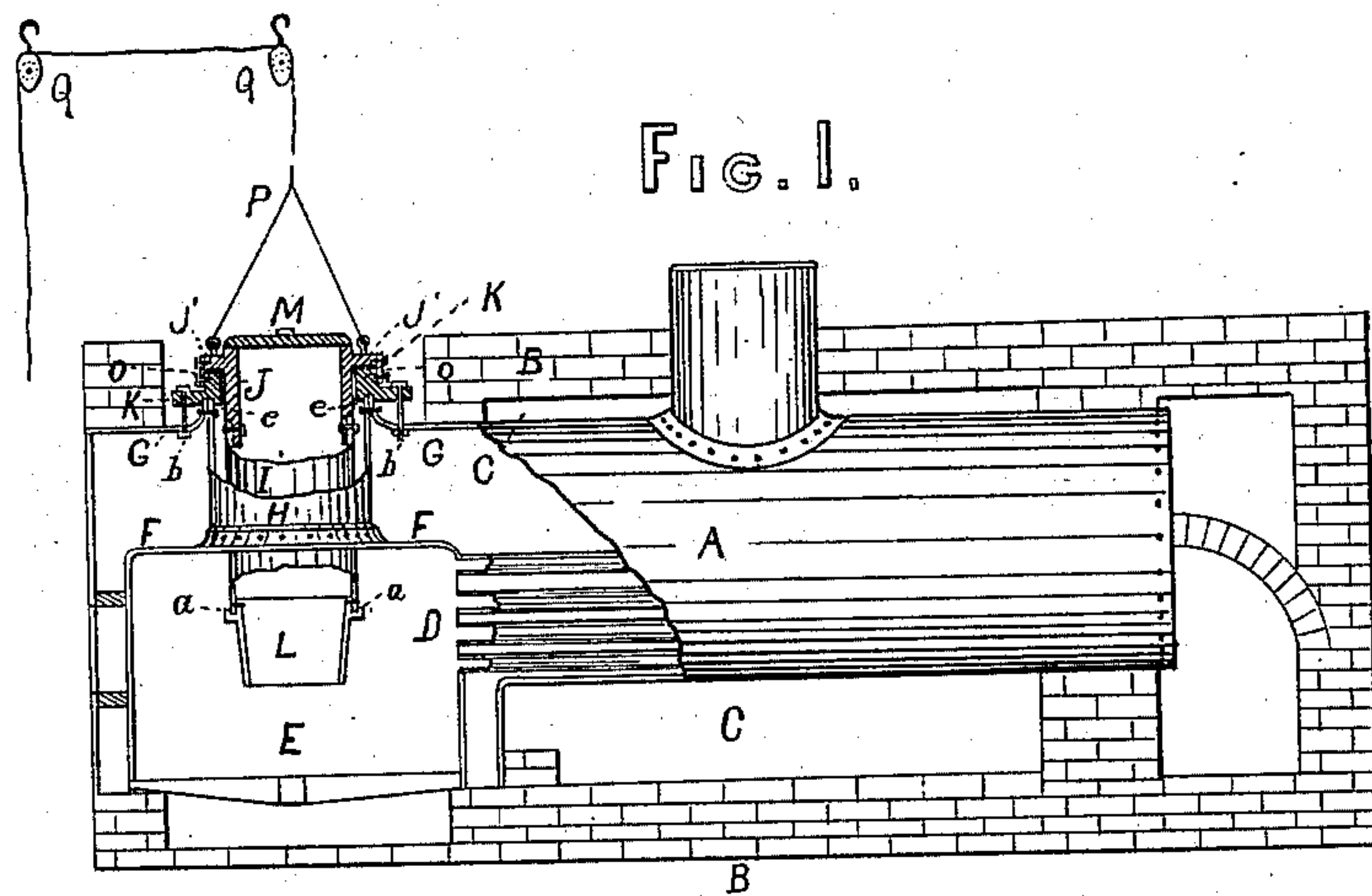


(No Model.)

FUEL MAGAZINE FOR STEAM GENERATORS.

No. 285,828.

Patented Oct. 2, 1883.



WITNESSES:

A. G. Morey.
Wm. M. Shepard

INVENTOR ·

George Mehring

BY

G. L. Chapin

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE MEHRING, OF CHICAGO, ILLINOIS.

FUEL-MAGAZINE FOR STEAM-GENERATORS.

SPECIFICATION forming part of Letters Patent No. 285,823, dated October 2, 1883.

Application filed July 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MEHRING, of the city of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Fuel-Magazines for Steam-Generators, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure 1 is a longitudinal vertical sectional elevation of a steam heating apparatus embodying my invention. Fig. 2 is an enlarged elevation of the upper portion of the improved magazine removed from the other parts; Fig. 3, a top or plan view of the magazine.

My invention relates to an improvement in magazines for steam-generators, and in combination of this improved magazine with the fire-box or locomotive pattern of boiler. The utility of fuel-magazines being a recognized fact, it is unnecessary to enumerate any advantages, except with reference to the novel construction of my improvement.

In the drawings, A is the boiler; B, the masonry surrounding the same; C, the exterior smoke-chamber; D, the horizontal smoke-flues; E, the fire-box; and F is the crown-sheet, and G is the wagon-top sheet, of an ordinary steam heating apparatus well known to the art.

H represents a substantial wrought-iron cylinder, which is riveted to the wagon-top sheet G and the crown-sheet F, forming a brace of proper strength for staying these two sheets, without the use of so many stay-rods or other devices as are employed in the ordinary construction. This cylinder forms one of the elements of my invention.

I represents an adjustable annular fuel magazine or reservoir, which is made of wrought-iron, with a cast-iron ring, J, riveted on at the top, and a cast-iron nozzle, L, riveted on at the bottom. The ring J is formed in a single casting, with a flange, J', which is faced on its under side to form a close joint with the top of an annular cast-iron ring, K, which supports the magazine I. This ring is provided with an annular groove to receive the projection formed by the riveting together of the edges of the cylinder H and the wagon-top G. The ring K is secured in place by bolts b, put through lugs d on its periphery and screwed into the wagon-top sheet G. The nozzle L is made in

the form of an inverted truncated cone, and it is provided near its top with an exterior top-faced flange, a, which "strikes a tight joint" with that portion of the under side of the ring K shown at e whenever the magazine is raised for the purpose of providing a space for cleaning the flues D, and thus preventing the escape of gases into the boiler-room. The magazine-cover is shown at M, and it is pivoted to the flange J', so as to swing to one side for supplying the magazine with fuel. It is held down, when closed, by buttons o, of ordinary construction—that is, buttons which are pivoted at their upper ends and notched at their lower ends, so as to engage or disengage pins or bolts at the lower ends.

I am aware that a well-known steam-boiler consists in part of a stationary magazine which is placed inside of a cylinder similar to H, and is provided with a similar cover and nozzle; but it has no distinct ring and flange J J', neither the ring a, which enables my device to be elevated by means of a branch chain, P, attached to the flange J' and drawn over pulleys Q by any suitable power. When it is known that a large majority of boilers will not admit of being cleaned from their front ends, in view of the position in which they are set with a stationary magazine in front, the advantages of the present improvement will be apparent, and be further understood when it is known that, where stationary magazines are used, anthracite coal has to be used as fuel, at an extra cost, because of the stoppage of the flues by the use of bituminous coal, the soot from which cannot be reached because of the stationary generator-magazine, and as a result the boiler has to be stripped, involving expense, loss of time, and great inconvenience. By the combination of the adjustable magazine with the ordinary fire-box boiler in the manner described these foregoing objections are removed, saving much time and care on the part of the operator.

What I claim as my invention is—

1. An annular adjustable fuel-magazine for steam heating-boilers, consisting of a wrought-iron cylinder, I, with a cast-iron ring, J, and flange J', attached to its upper end, and a ring or flange, a, attached to the upper end of the nozzle L, ring a being faced, in combination with the ring K, faced at e, to form a joint by

its contact with the ring *a*, and faced on its upper side to form a joint with the faced under side of the flange *J'* on the ring *J*.

2. In a fire-box boiler for steam heating, 5 the combination of a wrought-iron cylinder, uniting the wagon-top and crown sheets, and having at its top a fixed ring, with an adjustable fuel-magazine, *I*, which extends through the wrought-iron cylinder *H*, and from which it is 10 hoisted by chain and pulleys to enable the boiler-flues *D* to be cleaned, as specified.

3. The combination, in a steam heating apparatus, of a fire-box boiler, the wrought-iron cylinder *H*, and fixed ring *K* at the top of the 15 same, with an annular adjustable fuel-magazine, *I*, the horizontal tubes *D* for the passage of the products of combustion, and a smoke-cham-

ber wholly exterior to the said boiler, as specified.

4. The combination, in a steam heating ap- 20 paratus, of the fire-box *A*, the wrought-iron cylinder connecting the wagon-top *G* and crown-sheets *F*, the adjustable magazine *I*, the faced flange *J'* on the ring *J*, the annular cast-iron fixed ring *K*, supporting the magazine, 25 the cast-iron nozzle *L*, having a fixed ring, *a*, to prevent the escape of gas, the buttons *o*, the chain *P*, pulleys *Q*, the horizontal flues *D*, and the exterior smoke-chamber, *C*, constructed to operate as and for the purpose set forth.

GEORGE MEHRING.

Witnesses:

A. G. MOREY,
G. L. CHAPIN.