

(No Model.)

C. V. FLEETWOOD.

PETROLEUM BURNER.

No. 401,741.

Patented Apr. 23, 1889.

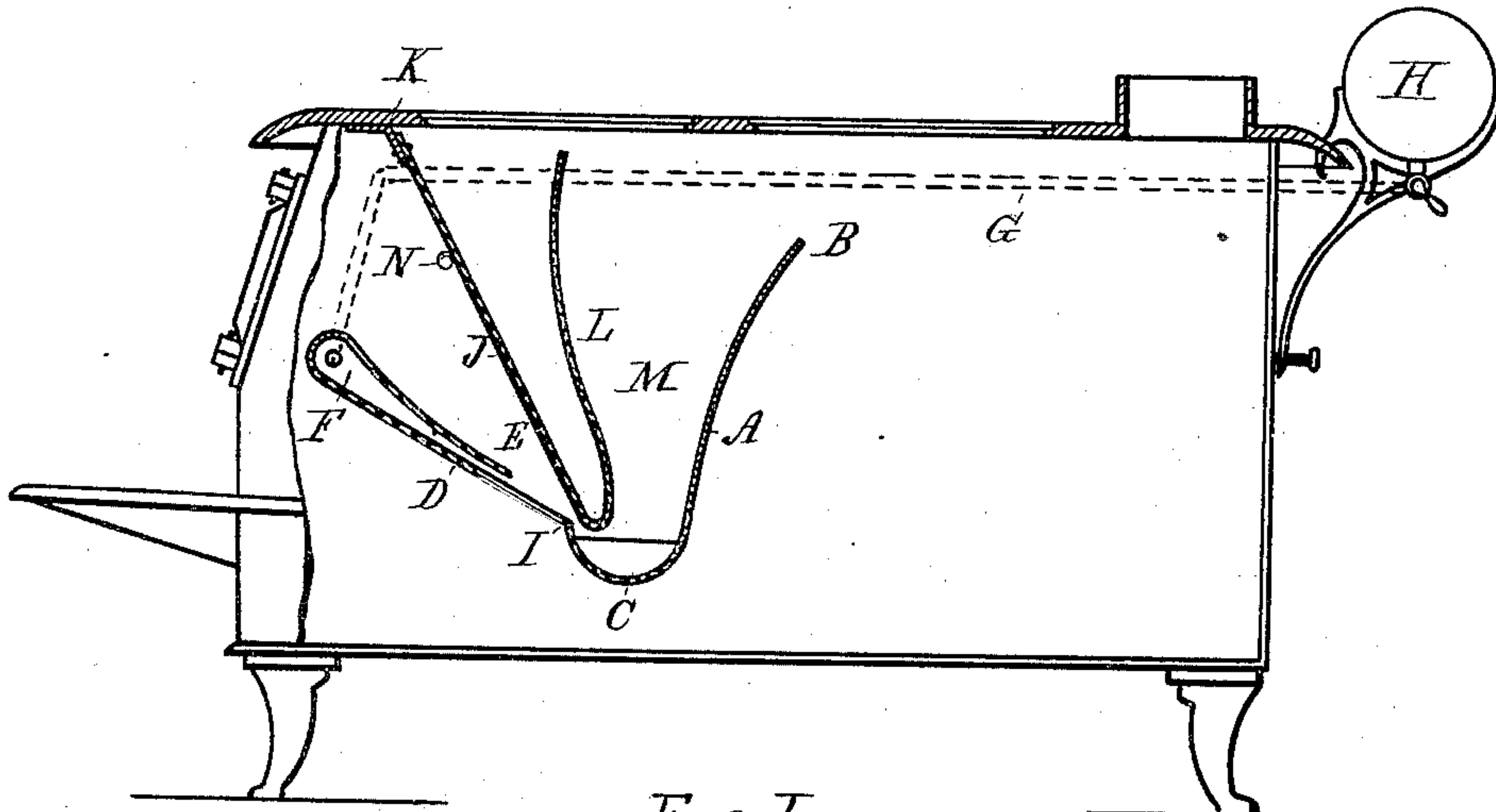


Fig. I.

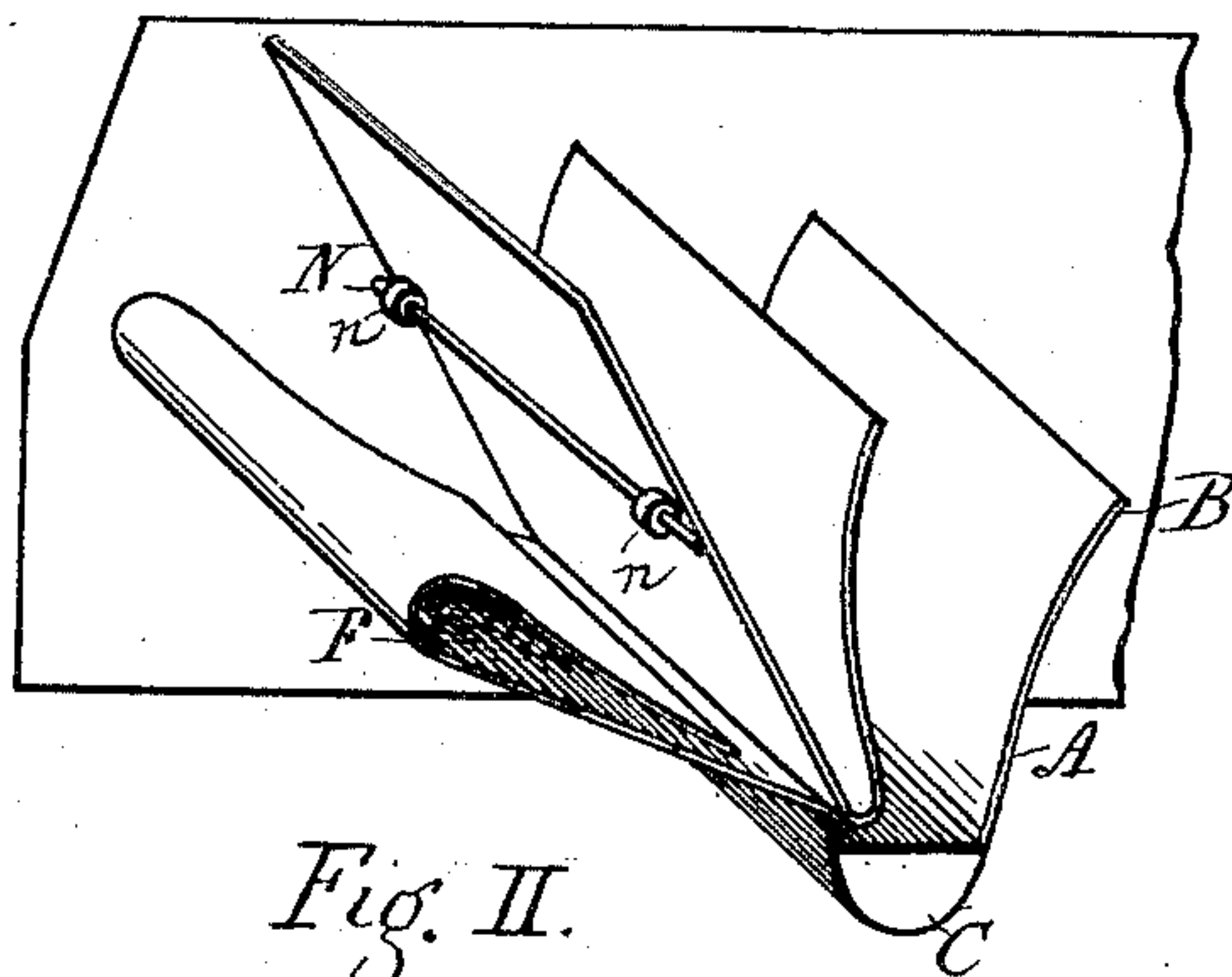


Fig. II.

WITNESSES:

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CALEB V. FLEETWOOD, OF CLEVES, OHIO.

PETROLEUM-BURNER.

SPECIFICATION forming part of Letters Patent No. 401,741, dated April 23, 1889.

Application filed November 30, 1887. Serial No. 256,577. (No model.)

To all whom it may concern:

Be it known that I, CALEB V. FLEETWOOD, of Cleves, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Petroleum-Burners, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure I is a side view, partly in section, of a stove equipped with my petroleum-burner, and Fig. II is a perspective view of the burner and the walls of the fire-chamber.

The object of my invention is to construct a petroleum-burner for stoves and furnaces; and it consists of a fire-box which has in connection with it, on its front side, a feed-chamber for supplying petroleum, and a peculiarly-constructed adjustable front plate for the fire-box, so that the draft and the supply of petroleum will be readily regulated, and by means of which the space in front of the fire-box, in which the petroleum-feed is located, will at all times be kept cool, as will now be set forth in detail.

This invention is designed as an improvement on application heretofore filed by me, being Serial No. 253,375.

The peculiar features in this invention consist, first, in the manner of constructing the fire-box so as to receive the petroleum, and, secondly, in the construction and arrangement of the front adjustable plate of the fire-box.

In this invention the stove shown in Fig. I is supplied with a curved plate, A, which extends transversely across the fire-box of the stove. The upper end of this plate is curved to the rear, as shown at B, while the central part of the plate is so curved as to form a trough, C. From this central depressed part the plate extends forwardly and upwardly at an angle of about twenty-five degrees, as shown at D, when the forward edge is bent over on the plate D, so as to provide a small space, E, between the lower plate, D, and the lap part. To the chamber F thus formed the supply-pipe G is conducted, which leads from the reservoir H. At the angle I of the plate A, which is formed by the junction of the trough C and inclination D, the lower end of the draft and feed plate J is placed. This feed-plate is hinged at its upper end to the

top or sides of the stove within, as shown by the pivots K, and extends down partly into the trough C, and is then bent back on itself to nearly a vertical position, so as to form a partition, L, between the combustion-chamber M and the plate J.

N is a cross-rod working eccentrics *n* fixed to it, and which are thus made to operate upon or against the front side of the plate J, by means of which the lower end may be adjusted to or from the angle or point I, as shown in Fig. I.

The operation is as follows: The petroleum passes from the reservoir H through the pipe G into the chamber F. It then passes down the inclined part D, through the opening E, and thence into the trough C, where the petroleum is ignited. All draft or air-supply is cut off except what passes between the plate J and the point I of the plate A. Thus the air or draft and the petroleum pass through the same aperture at the same time, and serve to feed the flames which issue up in the combustion-chamber N, and pass thence to the discharge-flue. The front plate, L, of the combustion-chamber being turned up at J also, it will be observed, serves as a deflecting-piece, so as to prevent the front sheet or plate, J, from being heated up by the flames in the combustion-chamber. This serves to prevent undue heat in the region of the supply-chamber F, and cold air being constantly passed over the feed-chamber and against the plate J, no damage will arise from undue heat. As the nature of petroleum is such as to produce more or less clogging whenever any attempts are made to reduce the quantity discharged, the present arrangement, whereby a thin film of the petroleum constantly issues from the discharge-aperture E, and also passes down over the angle-point I in the film, and the air at the same time, passing through the space between the point I and the plate J, prevents the clogging, because the discharge-point E is removed from the plate J, but not sufficiently far to become cold by the action of the air where the petroleum is ignited.

What I claim as new is—

1. In a petroleum burner or stove, the plate J, bent at L, and hinged at its upper end to the inside of the stove and forming the front

of the combustion-chamber, in combination with the rod N, having an eccentric, *n*, upon it, and the plate D, bent to form the chamber F, having the opening E, and the oil-inlet
5 pipe, whereby the oil-supply and the draft, which enter the combustion-chamber simultaneously and through the same aperture, can be regulated at will.

2. In a petroleum burner or stove, the com-
10 bustion-chamber composed of the rear upwardly-curved back, the trough C, the angle-point I, and plate D, bent to form the cham-

ber F, having opening E, and the plate J, having a shield or plate next to the combustion-chamber, and the oil-supply pipe, all com- 15 bined, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 1st day of November, 1887, in the presence of witnesses.

CALEB V. FLEETWOOD.

Witnesses:

J. S. ZERBE,

R. S. MILLAR.