

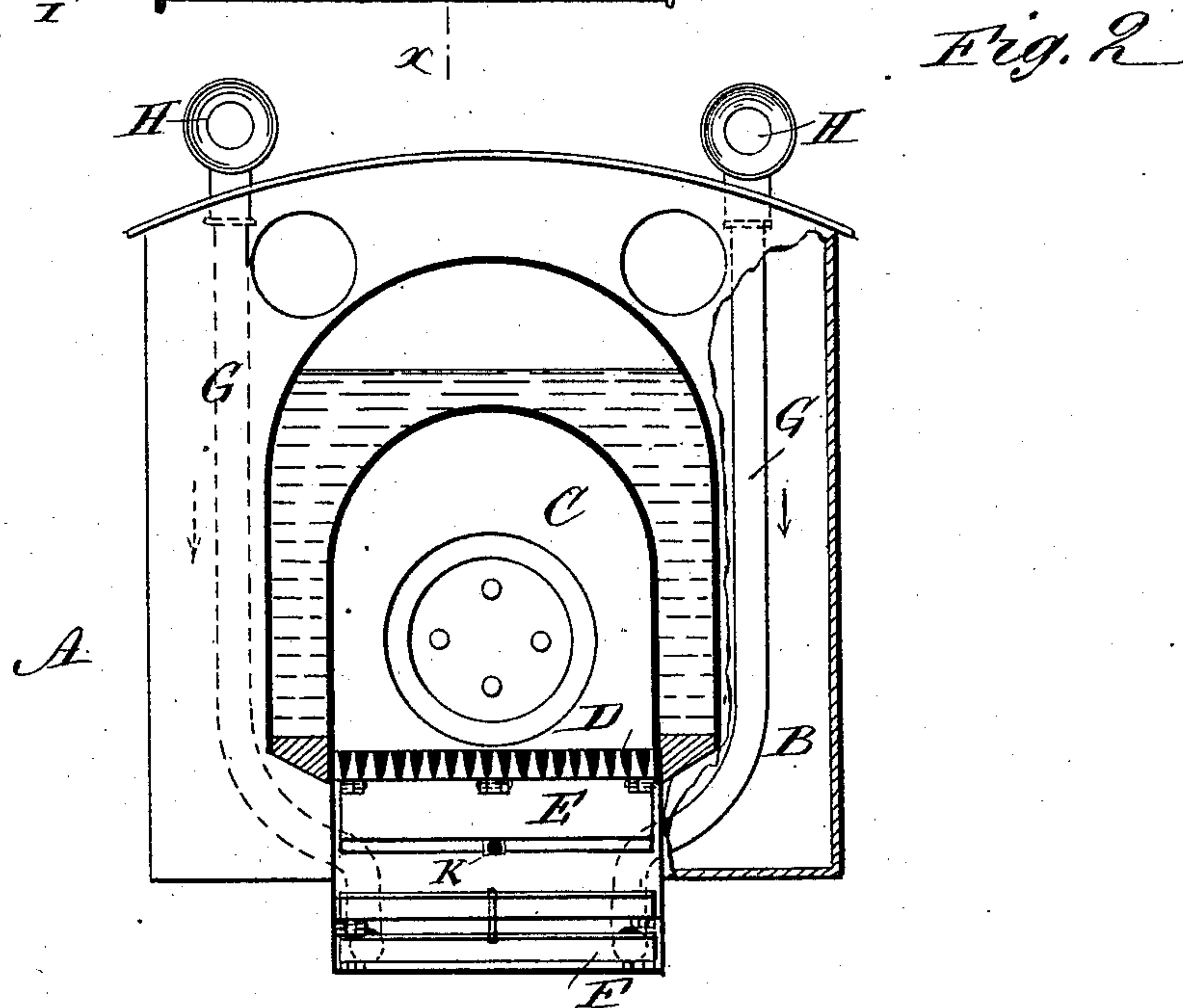
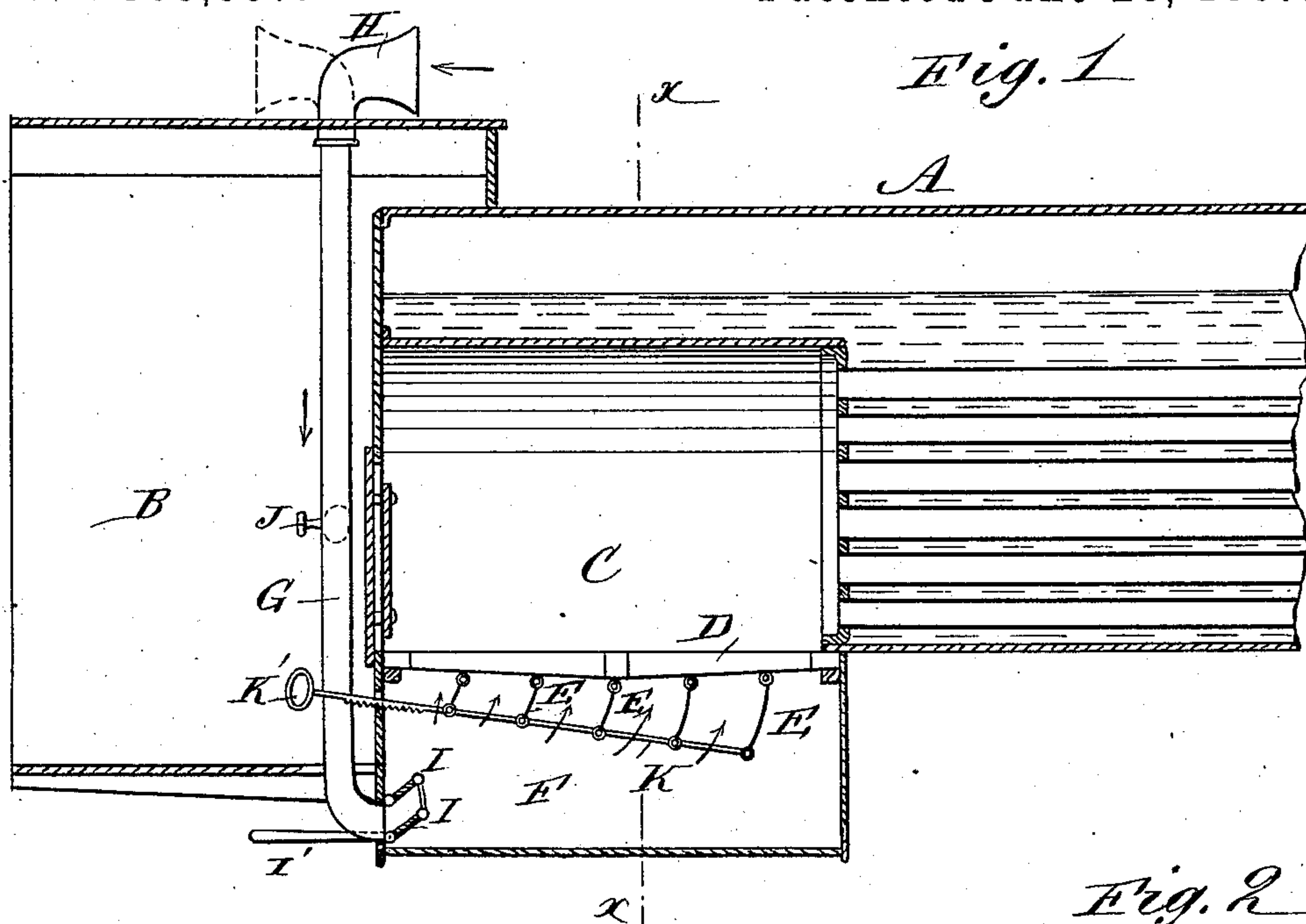
(No Model.)

G. W. WHEATER.

DRAFT ATTACHMENT FOR FURNACES.

No. 365,557.

Patented June 28, 1887.



WITNESSES:

C. Neveu
C. Sedgwick

INVENTOR:

G. W. Wheeler

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE W. WHEATER, OF OGDENSBURG, NEW YORK.

DRAFT ATTACHMENT FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 365,557, dated June 28, 1887.

Application filed March 10, 1887. Serial No. 230,392. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WHEATER, of Ogdensburg, in the county of St. Lawrence and State of New York, have invented a new and Improved Draft Attachment for Furnaces, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved draft attachment for supplying furnaces, especially locomotive-furnaces, with fresh air.

The invention consists of certain parts and details and the combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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

Figure 1 is a longitudinal sectional elevation of part of a locomotive provided with my improvement, and Fig. 2 is a vertical cross-section of the same on the line *xx* of Fig. 1.

My improvement can be applied to nearly all furnaces, but is especially adapted for locomotives, as represented in the accompanying drawings.

The locomotive A, of any approved construction, is provided with the usual cab, B, and the fire-box C, in which are placed the grate-bars D, on the under side of which are pivoted the concave deflectors E, graduated from front to rear and extending downward into the ash-pit F, into the front end of which leads a draft flue or flues, G, extending to the roof or side of the cab B, and provided on the outer end with a funnel, H, adapted to be turned on the said flue or flues G, so as to take air from any direction. The mouth of the flue or flues G, leading into the ash-pit F, open between two hinged plates, I, connected with each other, and operated by a lever, I', extending to the outside. The flue or flues G are provided with a damper, J, which regulates the amount of cold air entering the pit F.

The graduated and curved deflectors E are pivotally connected at their lower edges to an adjustable rod, K, provided with a handle, K', extending into the cab B. The rod K is made adjustable by means of notches engaging a

pin, so as to hold the deflectors E at any desired inclination in relation to the grate-bars D. Any number of flues G may be employed.

It will be seen that the air entering the funnel or funnels H passes into the ash-pit, and is thrown by the deflecting-plates I upon the graduated deflectors E, and from them directly into the fire or the grate-bars D, thus securing complete combustion of the fuel. The ash-pit F can be kept closed, so as to prevent fire from dropping on the railroad-track, and also to prevent snow or rain from entering the ash-pit.

I do not claim the graduated deflectors E and the grate-bars D, as the same are shown in my former patent, No. 353,104, dated November 23, 1886; but

What I claim is—

1. In a draft attachment for furnaces, the combination, with an ash-pit, of a flue opening into the said ash-pit and extending upward and outward, so as to draw in fresh air, the mouth or ash-pit end of said flue opening between two connected-together and lever-operated plates hinged to said flue, substantially as shown and described.

2. The combination, with the ash-pit, of a flue or flues opening into the said ash-pit and extending upward, and a funnel adapted to revolve on the upper end of each of the said flues, so as to take the air from any direction, the mouth or ash-pit end of said flue opening between two connected-together and lever-operated plates hinged to said flue, substantially as shown and described.

3. The combination, with the ash-pit and grate-bars, of concave graduated deflectors pivoted on the said grate-bars, and a flue leading into the said ash-pit and extending upward, so as to take in fresh air from the outside, substantially as shown and described.

4. The combination, with the ash-pit and the grate-bars, of a flue opening into the said ash-pit and extending to the outer air, and deflecting adjustable plates at the ash-pit end of the said flue, substantially as shown and described.

5. The combination, with the ash-pit and the grate-bars, of graduated deflectors, means, as described, for adjusting the said deflectors

in relation to the grate-bars, a flue opening
into the said ash-pit and extending upward, a
funnel adapted to revolve on the upper end
of the said flue, and a damper for regulating
5 the supply of fresh air entering the said fun-
nel and flue, the mouth or ash-pit end of said
flue opening between two connected-together

and lever-operated plates hinged to said flue,
substantially as shown and described.

GEORGE W. WHEATER.

Witnesses:

GEORGE B. SHEPARD,
FRANCES E. DUANE.