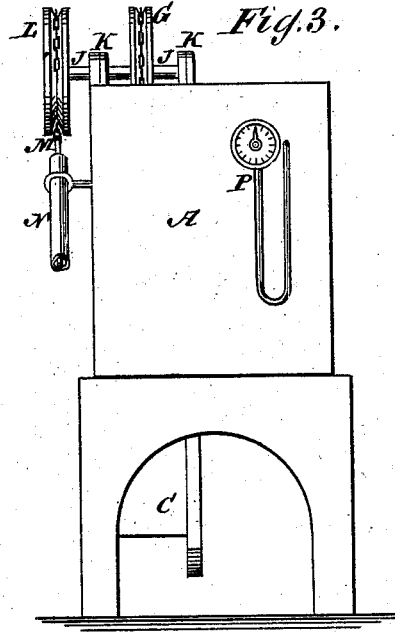
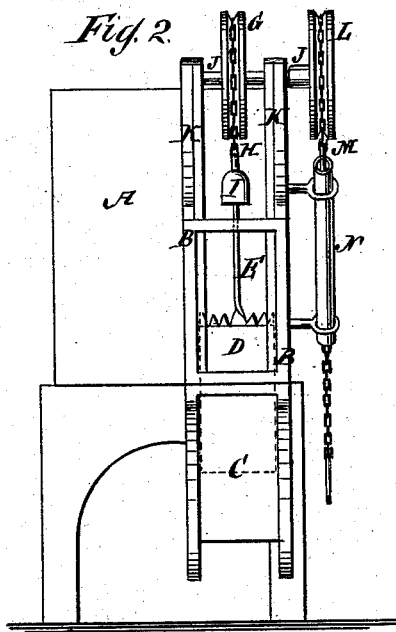
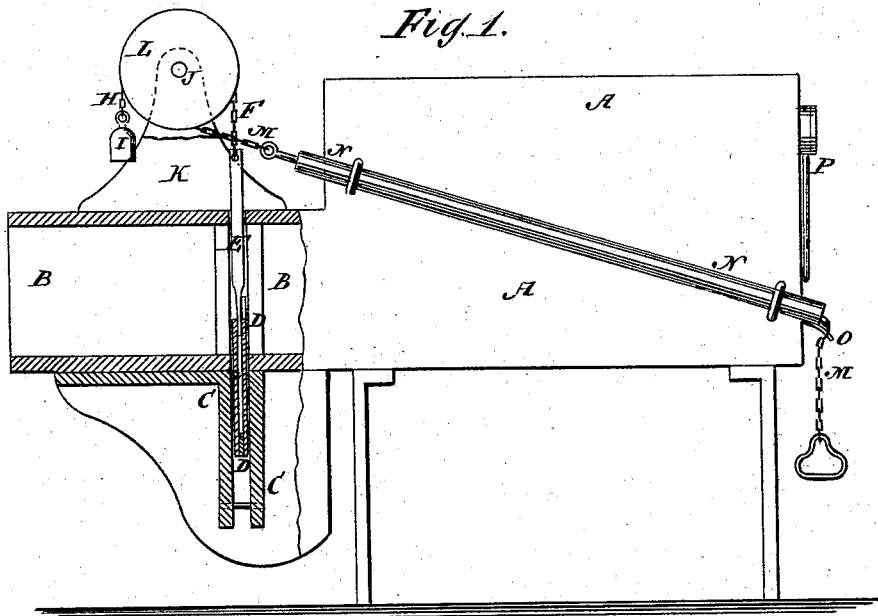


T. BAKER.
DRAFT REGULATOR.

No. 190,181.

Patented May 1, 1877.



WITNESSES:

E. Wolff.
J. H. Scarborough.

INVENTOR:

T. Baker.

BY

Munnell

ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS BAKER, OF ALBANY, NEW YORK.

IMPROVEMENT IN DRAFT-REGULATORS.

Specification forming part of Letters Patent No. **190,181**, dated May 1, 1877; application filed April 2, 1877.

To all whom it may concern:

Be it known that I, THOMAS BAKER, of Albany, in the county of Albany and State of New York, have invented a new and useful Improvement in Draft-Regulator, of which the following is a specification:

Figure 1 is a side view of my improved device, the flue, damper, and damper-case being shown in section. Fig. 2 is a rear view of the same. Fig. 3 is a front view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved apparatus which shall be so constructed as to enable the fireman to control his fire, so that the heat, after the fire is fully burning, may be prevented from passing off with the products of combustion to so great an extent as it otherwise would, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the open-bottomed case, the damper, bar, and chain, the weight and chain, the pulleys and shaft, and the chain, guard, and point, with each other and with the flue of a furnace, as hereinafter fully described.

A represents a boiler and furnace, and B represents the flue through which the smoke and other products of combustion pass to the chimney. To the lower side of the flue B is attached a case, C, to receive the damper D, and which is made with an open bottom, so that the soot and ashes that may enter it will drop out, and cannot accumulate and obstruct the movement of the said damper. The damper D moves up and down through a transverse slot in the lower side of the flue B, and its upper edge is notched or serrated, so that should it be accidentally drawn fully up, it cannot close the flue B so tightly as to prevent the sulphurous vapors and other harmful gases from passing off.

To the damper D is attached a bar, E, which passes up through a hole in the top of the flue B, and to its upper end is attached one end

of a short chain, F, the other end of which is attached to a wheel or pulley, G. From the other side of the pulley G is suspended, by a chain, H, a counterpoise-weight, I, to partially balance the damper D, but is not heavy enough to prevent the said damper, when released, from descending by its own weight. The wheel or pulley G is attached to a shaft, J, which revolves in bearings K, attached to the upper side of the flue B. To one end of the shaft J is attached a wheel or pulley, L, around which passes, and to which is attached, a chain, M, which passes through a tubular guard or shield, N, secured to the side of the furnace A, or to other suitable supports, and which terminates at the front of the furnace. The end of the chain M projects from the forward end of the guard N, and has a handle attached to it.

By this construction, by pulling upon the chain M, the damper D can be raised to any desired extent, and can be secured in place, when adjusted, by passing a link of the said chain M over a pin, O, attached to the forward end of the guard N. By counting the links of the chain M drawn from the forward end of the guard N the fireman can adjust the damper D in any desired position without leaving the front of the furnace.

P is a steam-gage, attached to the front of the boiler, so that the fireman can always see what the steam-pressure is, and can regulate the damper as required.

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

The combination of the open-bottomed case C, the damper, bar, and chain, D E F, the weight and chain I H, the pulleys and shaft G L J, and the chain, guard, and pin M N O, with each other and with the flue B of a furnace, A, substantially as herein shown and described.

THOMAS BAKER.

Witnesses:

WM. J. LA BARTE,
MARTIN CAIN.