W. W. CHAPIN.
Furnace-Feeder.

No. 209,227. Patented Oct. 22, 1878

Fig. 1.

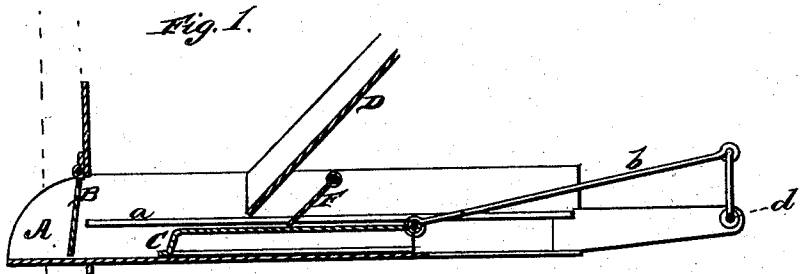
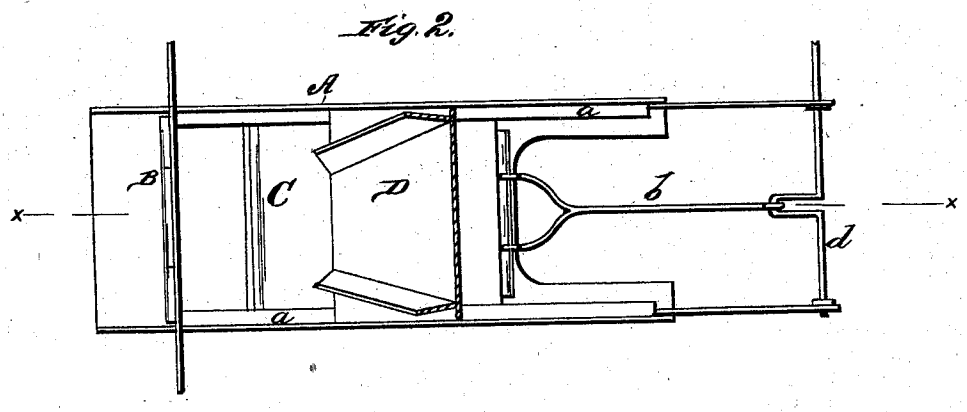


Fig. 2.



WITNESSES
Robert Everett.
James J. Sheehy.

INVENTOR.
William W. Chapin.
By Johnson, Fairbank & Co.
ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. CHAPIN, OF MANISTEE, MICHIGAN.

IMPROVEMENT IN FURNACE-FEEDERS.

Specification forming part of Letters Patent No. **209,227**, dated October 22, 1878; application filed September 28, 1878.

To all whom it may concern:

Be it known that I, WILLIAM W. CHAPIN, of Manistee, in the county of Manistee and State of Michigan, have invented a new and valuable Improvement in Furnace-Feeders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 of the drawings is a section through lines *x x* of my furnace-feeder; and Fig. 2 is a top-plan view, part sectional, of the same.

The nature of my invention consists in the construction and arrangement of a device for feeding sawdust, chips, &c., to furnaces, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents a spout, which is to be arranged in horizontal position, with its inner end a little above the fire-grate of the furnace. In the spout A, at or near the inner end, is a swinging door, B, hung at the top, as shown. In the sides of the spout A are suitable guides *a a*, in which moves a scraper, C, connected by a pitman, *b*, with a crank-shaft, *d*, and this crank-shaft may be operated by any suitable mechanical means.

D represents part of the chute or conductor, through which the sawdust, &c., are fed to the spout A. Back of this chute or conductor is hung an auxiliary scraper, F, which is arranged in an inclined position, and has its lower end resting on top of the main scraper C.

The operation of my device is as follows: The crank-shaft *d*, being rotated, gives a reciprocating motion to the scraper C on the bottom of the spout A, forcing the sawdust or other kinds of fuel into the furnace under the trap-door or swinging door B, and as the scraper is drawn back this trap-door closes, and prevents sparks from escaping from the furnace. As the scraper C recedes, the inclined auxiliary scraper F causes the sawdust, &c., that had dropped onto the scraper C on the return stroke to fall in front of the said scraper C, which will cause it to be pushed into the furnace, and as fast as it will be furnished from the chute or conductor D.

The front end of the scraper may be hinged, if desired.

I am aware that furnace-feeders are in use in which a series of hinged pushers are operated in a spout by a crank and pitman, and anchors in the bottom of the spout prevent the fuel from being drawn back when the pushers are drawn back, and for which I have made application for Letters Patent. A piston or plunger has also been employed to feed the fuel to the furnace. The English Patent No. 1,792 of 1860 shows a sliding block for the same purpose. Neither of these constructions is sought to be covered in this application.

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

In a furnace-feeding device, the hinged inclined or auxiliary scraper F, in combination with the reciprocating pusher C, constructed and arranged to operate in the manner and for the purpose herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM W. CHAPIN.

Witnesses:

JAMES J. SHEEHY,

GEORGE E. UPHAM.