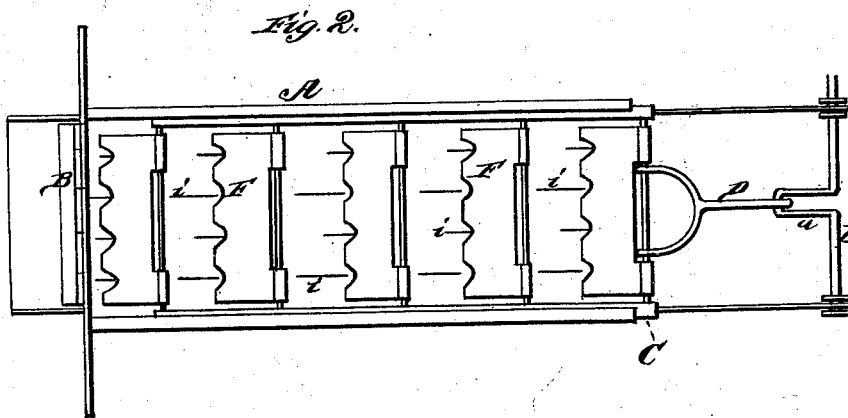
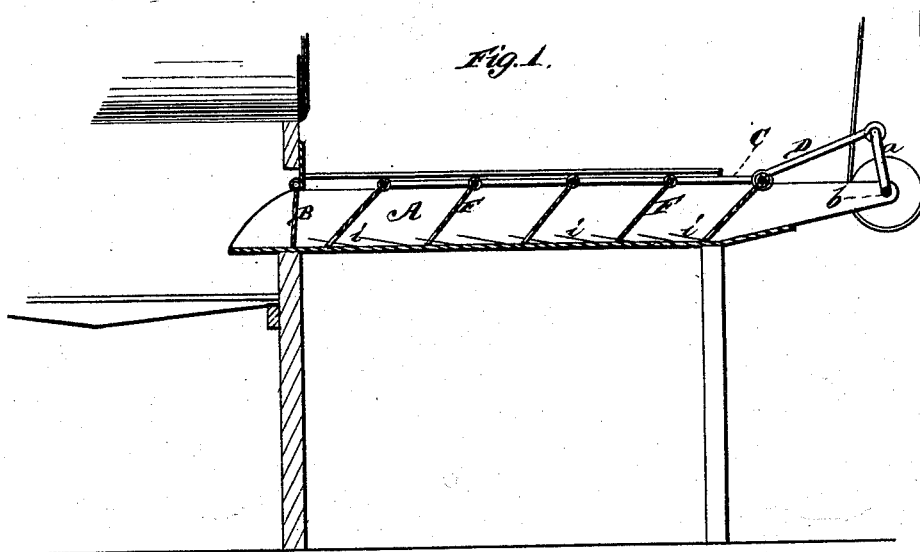


W. W. CHAPIN.  
Furnace-Feeder.

No. 209,228.

Patented Oct. 22, 1878.



WITNESSES  
*Robert Emmett*  
*George C. Upham*

By

INVENTOR.  
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ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIAM W. CHAPIN, OF MANISTEE, MICHIGAN.

## IMPROVEMENT IN FURNACE-FEEDERS.

Specification forming part of Letters Patent No. **209,228**, dated October 22, 1878; application filed September 14, 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 longitudinal central section of my furnace-feeder, and Fig. 2 is a top-plan view of the same.

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

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

A represents a spout, of any suitable dimensions, to be so arranged that its inner end will be above and close to the fire-grate of the furnace. This end of the spout is provided with a swinging door, B, hung at the top, as shown.

In the upper portion of the spout A are suitable grooves to receive a longitudinally-sliding frame, C, which is, by a pitman, D, connected with a crank, *a*, on a shaft, *b*, and this shaft is to be rotated by any suitable or convenient means, so as to give the frame a horizontally-reciprocating motion.

In the frame C are hung a series of pushers, F, which incline toward the inner end, as shown. When the frame C, with pushers F attached, is moved forward, the sawdust or shavings, &c., are carried into the furnace through the swinging or trap door, which door admits the sawdust or shavings into the furnace or onto the grate-bars; and when the

sliding frame recedes the trap-door closes, preventing sparks from escaping, and also keeping cold air from entering the furnace.

During the backward movement of the frame C the pushers, being hung on hinges, slide back over the sawdust, which is held by anchors *i i* fastened to the bottom of the spout. These anchors may be in the form of forwardly-inclined pins, as shown, or of any other suitable or convenient form that will answer the purposes intended.

The apparatus is to be supplied from a spout which is to get its supply from a conveyer, or by other suitable means.

I am aware that a reciprocating plunger or piston and also a sliding block has been used to feed the sawdust to the furnace, neither of which is sought to be covered in this application.

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

1. A furnace-feeder consisting of a reciprocating frame provided with a series of pushers hinged to it and operating in a spout, substantially as and for the purpose herein set forth.

2. The combination of the spout A, trap-door B, reciprocating frame C, and pushers F, substantially as and for the purpose herein set forth.

3. The anchors *i*, attached to the bottom of the spout A, in combination with the hinged pushers F, hung in the reciprocating frame C, 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:

LEWIS T. KELLOGG,  
C. B. LEWIS.