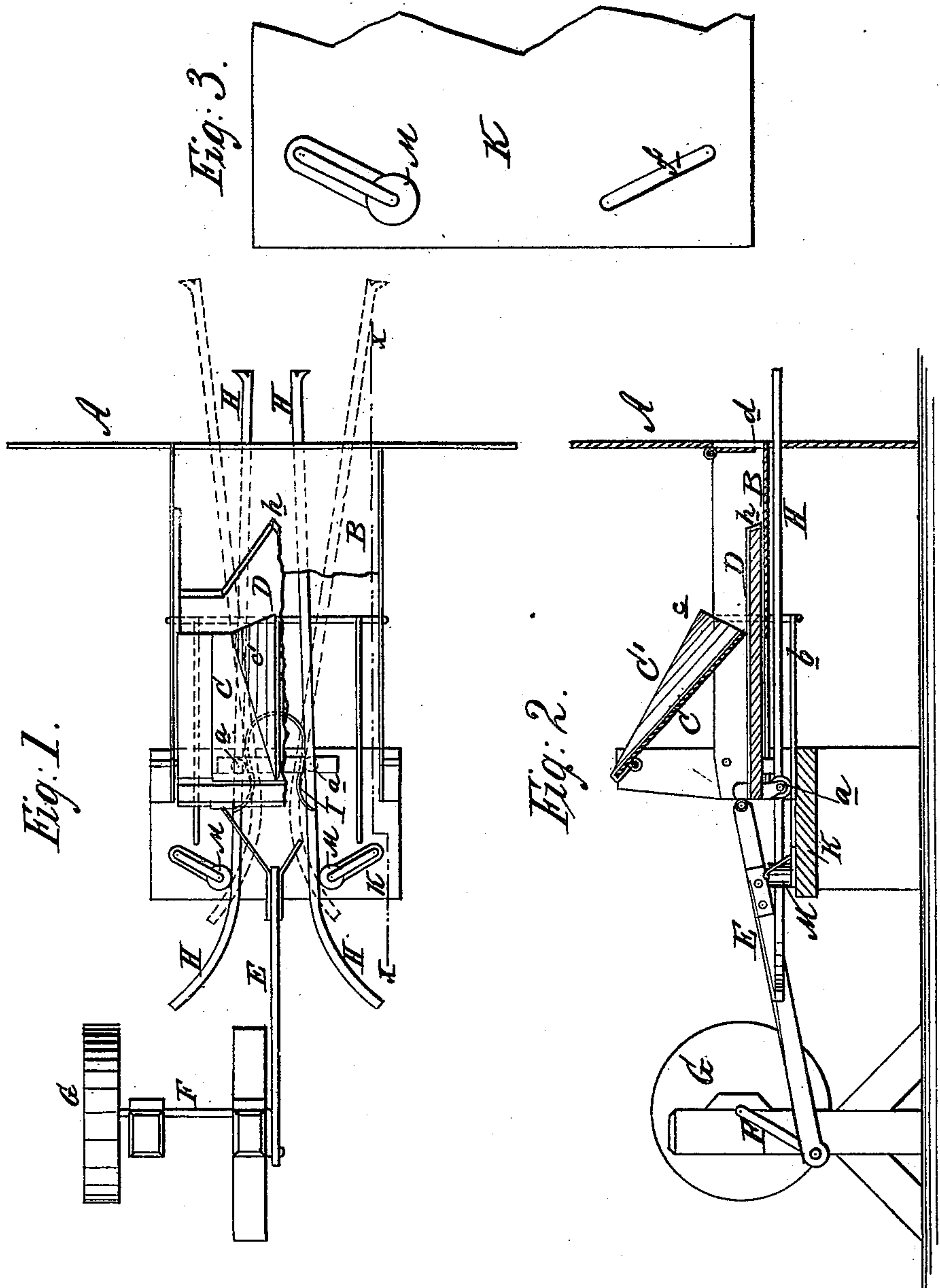


(Model.)

I. ERICKSON.
Furnace Feeder.

No. 230,257.

Patented July 20, 1880.



WITNESSES:

A. Seckel.
C. Sengwick

INVENTOR:

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UNITED STATES PATENT OFFICE.

ISRAEL ERICKSON, OF WHITEHALL, MICHIGAN.

FURNACE-FEEDER.

SPECIFICATION forming part of Letters Patent No. 230,257, dated July 20, 1880.

Application filed April 22, 1880. (Model.)

To all whom it may concern:

Be it known that I, ISRAEL ERICKSON, of Whitehall, in the county of Muskegon and State of Michigan, have invented a new and Improved Furnace-Feeder, of which the following is a specification.

The object of this invention is to provide a simple and effective device for feeding sawdust, shavings, &c., to a fire and spreading them thereon.

The invention consists of spreading-bars or spreaders having outwardly-curved rear ends, and pivoted at about the center of their lengths to the under side of a reciprocating plate or frame that is supported on rollers and works in a spout or conductor which is fixed in front of a fire-door, said spreaders being opened or spread laterally by contact of their curved ends with fixed rollers, and being closed by a connecting-spring.

Figure 1 is a plan of the device with parts broken away to exhibit other parts. Fig. 2 is a sectional side elevation on line *x x*, Fig. 1. Fig. 3 is a plan of a portion of the device, showing the manner in which the spreader-rollers may be adjusted.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the front of a boiler, and B a horizontal spout or conductor connected with the fire-door opening thereof. C is a chute, down which the sawdust, shavings, &c., fall into the conductor B, and suspended on said plate C and resting thereon is a laterally-adjustable sheet or guide *C'*, bent so as to form an upward central triangular projection, *c*. D is the feeder, consisting of a flat plate or frame, having rollers or wheels *a a*, that run on the rods or tracks *b b*, below the conductor B, and thereby assist in supporting the said feeder D in position. Said feeder D is reciprocated forward and back over the face of the conductor B by means of the pitman E, that connects said feeder D with the crank-shaft F, power being applied to said crank-shaft F by means of the pulley G. The forward end, *h*, of said feeder D is centrally pointed, in order the better to distribute the sawdust, &c., upon the fire-sur-

faces under the boiler. The spreading-bars or spreaders H H are pivoted side by side on the under side of the feeder D, near the rear edge thereof, so that their ends are free to move laterally, and the front ends of said spreaders H H, when retracted, extend but slightly within the fire-door opening *d*, and are preferably notched and turned sidewise, as shown in Fig. 1, to give them more pushing-surface, while the rear ends of said spreaders H H, or that portion of them in the rear of their pivoting-points, are curved outward, as shown. A spring, I, set between said spreaders H H and connected therewith, serves to hold them closed when they are retracted or withdrawn from the furnace.

On a platform, K, at the rear of the conductor B, the horizontal rollers M M are adjustably secured in the slots *f f*, so that said rollers M M may be arranged in suitable position in relation to the spreaders H H.

When motion is given to the crank-shaft F the spreaders H H move forward and back with the feeder D, the ends of said spreaders H H entering well into the furnace of the boiler, and as said spreaders H H move forward their rear curved ends press laterally against the fixed rollers M M, and are thereby made to approach each other with the result of spreading or opening apart the front ends of the said spreaders H H. Hence, when the device is in operation the sawdust, &c., is fed down by the chute C onto the conductor B, and, being directed evenly or to either side of said conductor B by the corresponding adjustment of the triangular guide-sheet *C'*, is pressed forward into the furnace by the feeder D, and the spreaders H H are at the same time entered into the fire-place and opened laterally to spread said sawdust, &c., evenly over the fire-surface.

By adjusting the rollers M M in the slots *f f* the spreaders H H may be spread open to a greater or less degree, according to the requirements of the fire or furnace.

The spreaders H H do not close completely, and hence when retracted will not draw fuel from the furnace.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A furnace-feeder constructed substantially as herein shown and described, consisting of the conductor B, chute C, provided with adjustable triangular guide C', feeder D, provided with rollers *a a*, and spring and roller actuated spreaders H H, as set forth.
2. In a furnace-feeder, the pivoted spreaders H H, provided with outward-curved rear ends,

in combination with rollers M, all arranged substantially as herein shown and described.

3. The combination, with the spreaders H H, of the connecting-spring I and rollers M M, substantially as herein shown and described.

ISRAEL ERICKSON.

Witnesses:

HELEN D. HEDGES,
PAUL I. HEDGES.