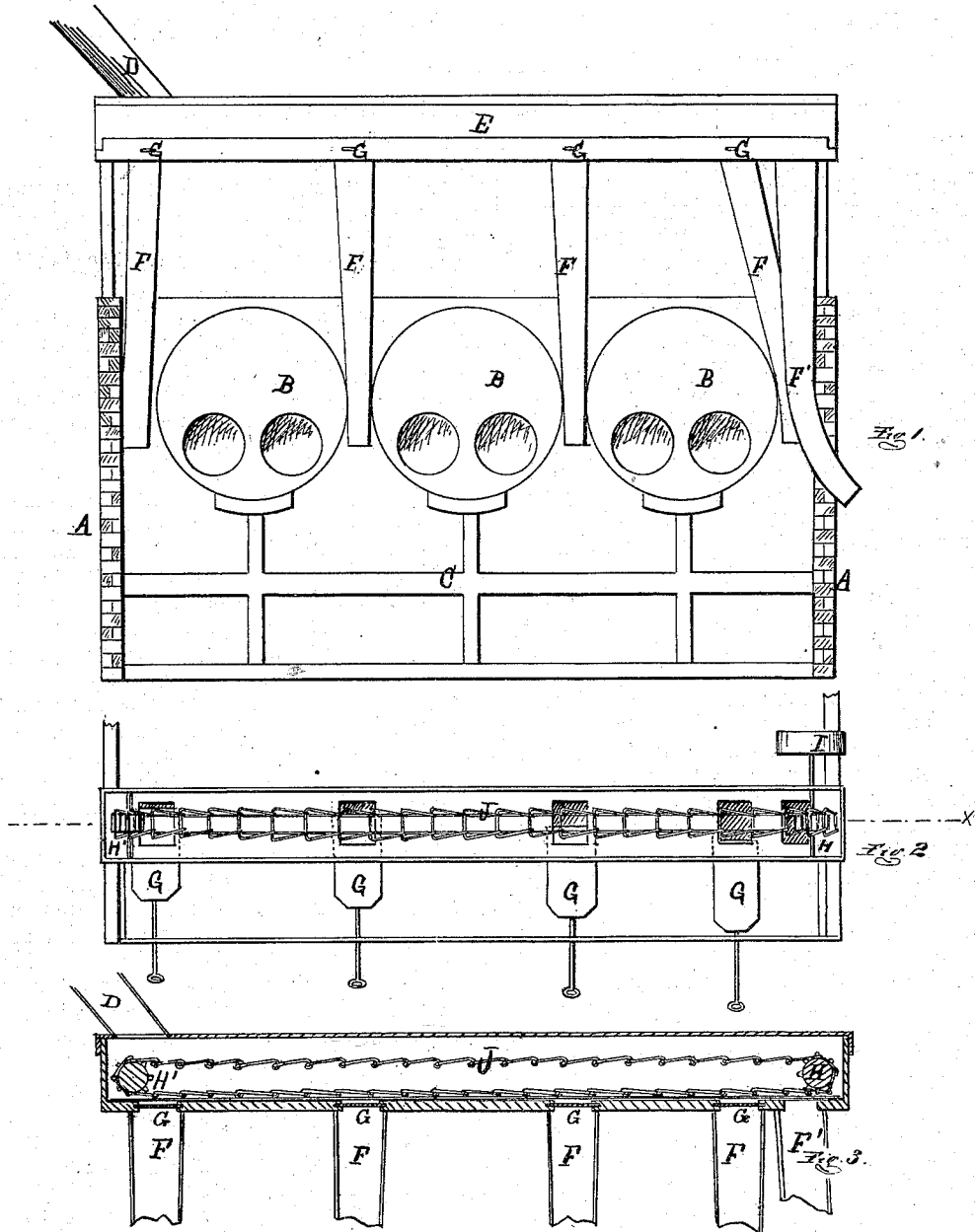


M. GARLAND.

Improvement in Sawdust-Feeders for Furnaces.

No. 127,335.

Patented May 28, 1872.



ATTEST:

N. S. Sprague
H. A. Clark

INVENTOR:

Michael Garland
Per Atty-
W. S. Sprague

UNITED STATES PATENT OFFICE.

MICHAEL GARLAND, OF WEST EAU CLAIRE, WISCONSIN, ASSIGNOR TO
GARLAND, INGRAM & CO., OF SAME PLACE.

IMPROVEMENT IN SAWDUST-FEEDERS FOR FURNACES.

Specification forming part of Letters Patent No. 127,335, dated May 28, 1872.

To whom it may concern:

Be it known that I, MICHAEL GARLAND, of West Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Improvement in Sawdust-Feeders for Furnaces; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is an elevation of a nest of boilers, with the fire-front removed to show my improved feeding apparatus. Fig. 2 is a plan of the distributing-trunk; and Fig. 3 is a vertical section on the line *xx* in Fig. 2.

Like letters refer to like parts in each figure.

The nature of this invention relates to a device for mechanically firing a nest of saw-mill boilers with sawdust without opening the furnace-doors for that purpose; and it consists in the peculiar construction and arrangement of a trunk which receives the sawdust from the carrier, the said trunk being provided with spouts leading into the furnace between and at the sides of the boilers, and an endless chain traveling within the trunk to distribute the sawdust to said spouts, which are provided with valves to regulate the volume flowing through them; also, in an extra spout at the further end of the trunk to carry off the sawdust in case the valves are closed and any excess over the requirement of the steam generators.

In the drawing, A represents an arch, in which are set the steam-boilers B, the fire-front being removed to show them. C represents the front support of the fire-grates, which are, preferably, of perforated metal. D is the end of a sawdust-carrier, discharging it, as fast as made by the saws, into the end of the horizontal iron trunk E, erected over the front end of the battery, from which depend a number of iron spouts, F, which discharge the sawdust into the furnace between and at the sides of the boilers. At the top of each spout

there is a valve, G, which may be opened or closed by the fireman. At the end of the trunk opposite the carrier there is a spout, F', which may discharge outside of the fire-room or on the hearth, as preferred. H H' are chain-wheels journaled at either end of the trunk, the former being rotated by a belt from any convenient pulley in the mill passing around the pulley I on the projecting end of its shaft. J is an endless chain passing around the pulleys H H'.

The sawdust being led to the trunk of the carrier, and the chain in motion, the valve of the spout nearest the carrier should be opened a little, the next one a little more, and so on until the last, which should be wide open, which will insure the delivery of an equal volume of sawdust through all the spouts to the interior of the furnace; and the volume may be regulated as desired by opening or closing the valves G. In case more sawdust is made than the furnace requires the excess passes off through the spout F', which is always open, and which likewise prevents any damage arising from the accidental clogging of the spouts.

The trunk and spouts should be constructed of metal; for if of wood they might readily ignite should the spouts from any cause clog.

I am aware of the Letters Patent granted to Samuel Sykes June 15, 1869, in which is shown a series of spouts discharging into the furnace between the boilers; and while I disclaim the invention of the arrangement of the said spouts in that manner—

What I do claim as my invention, and desire to secure by Letters Patent, is—

The construction and arrangement of the trunk E, spouts F, valves G, chain-wheels H H', endless chain J, and the spout F' with relation to the boilers B in the arch A, as and for the purpose set forth.

MICHAEL GARLAND.

Witnesses:

H. G. ROBBINS,
ED. O. CONNOR.