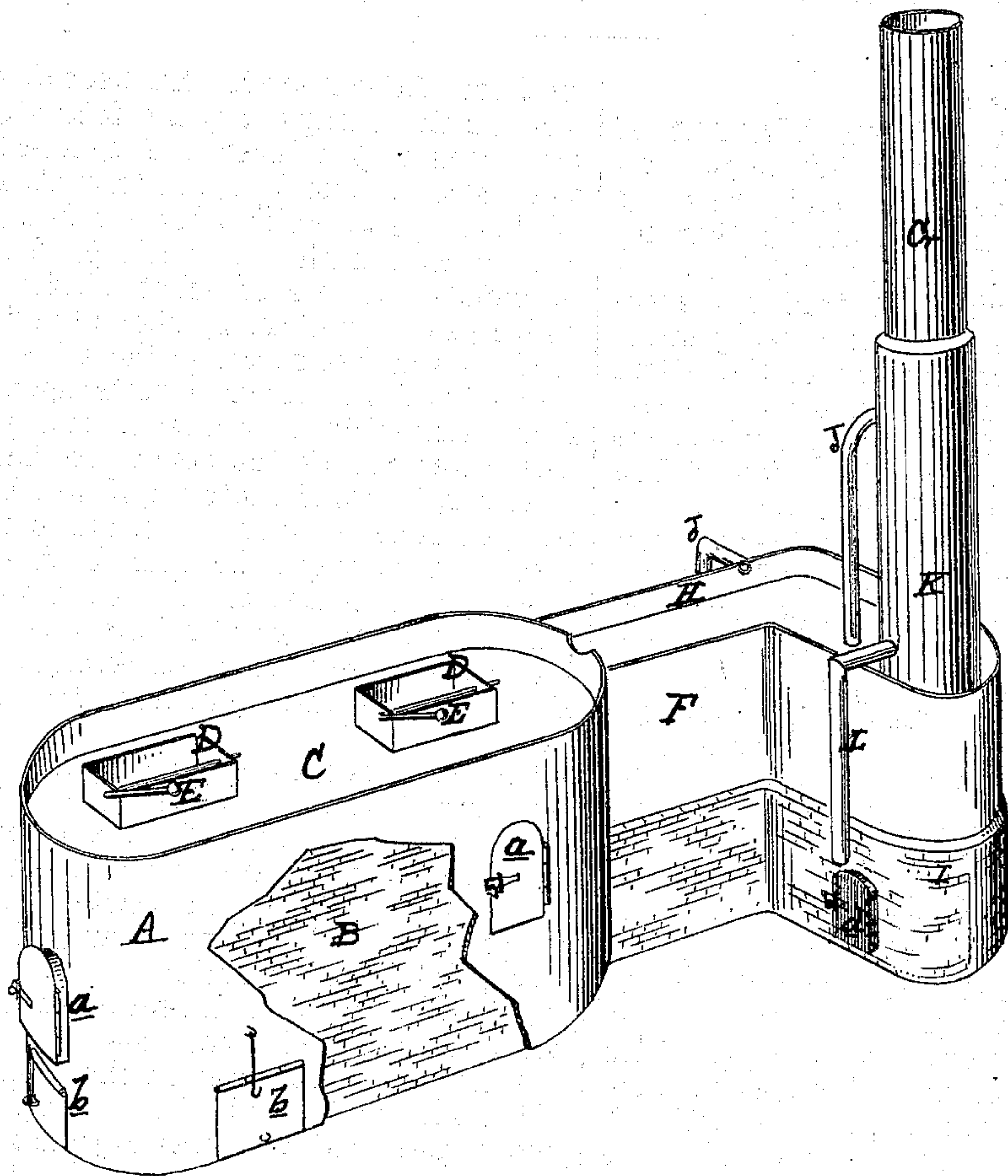


PETER WALKER.

Improvement in Furnace for Burning Saw-Mill and other Refuse.

No. 127,393.

Patented May 28, 1872.



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UNITED STATES PATENT OFFICE.

PETER WALKER, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN FURNACES FOR BURNING SAWMILL AND OTHER REFUSE.

Specification forming part of Letters Patent No. 127,393, dated May 28, 1872.

To whom it may concern:

Be it known that I, PETER WALKER, of Muskegon, in the county of Muskegon and State of Michigan, have invented a new and useful Improvement in Furnaces for Burning Saw-Mill and other Refuse; 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 my invention is shown in perspective and with section of shell broken away to show fire-brick lining.

This invention has for its object the construction of a perfectly fire-proof furnace for the purpose of burning sawdust, edgings, and other accumulations of refuse about large lumber-manufacturing establishments, so arranged as not to transmit sufficient heat to endanger the surrounding property. The invention consists in the combination and arrangement of the principal parts, all constructed substantially as hereinafter described.

In the accompanying drawing, A represents the outer wall of the furnace, preferably constructed of boiler-iron, and lined with fire-brick, B. Through this shell and lining, and above a suitable grate, are proper openings, *a*, provided with doors, as shown, through which a fire may be kindled and stirred, as occasion may require. Other openings, *b*, provided with suitable covers or doors, situated below the grate, afford more or less draught, as may be required. The top of this furnace is depressed below the top edges to form a water-pan, C. Through this top metallic funnels D are arranged, through which the refuse of the mill may be thrown into the furnace. The doors or traps which close these funnels are so hung therein that they open and discharge into the furnace any refuse that may be deposited up-

on them. After the refuse has been discharged through these traps they are instantly closed by means of the lever and counterbalance-weight E. A flue, F, opens from the rear end of this furnace, which affords a draught and communication with the stack G. This flue is provided with a water-jacket, H, the sides of which project sufficiently above the flue, so as to allow water to surround the sides and top thereof, while its bottom rests upon a solid foundation of brick or other suitable material. The lower end of the stack terminates in a chamber, I, into the interior of which, for the purpose of clearing out ashes and cinders, access is had through the door *d*. J are overflow-pipes, designed to carry off a surplus of water from the water-jackets, one of which latter also surrounds the stack, and is lettered K. L is a discharge-pipe from the water-jacket K.

The water-spaces may be filled, if desired, by pumps operated by the mechanism which drives the adjoining mill. I am aware that there are devices for this purpose already in use, but none of them, in practice, have been found to be safe. Consequently I disclaim any part in their invention.

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

A refuse-burner wherein the shell A, provided with water-tank C and funnels D, the flue F provided with water-jacket H, stack G provided with water-jacket K, chamber I, and pipes J and L are combined, arranged, and constructed, substantially as described and shown.

PETER WALKER.

Witnesses:

H. J. HOYT,
MATHIAS KLOPP.