

J. A. MEAGLEY.

FURNACE FOR BURNING WET FUEL.

No. 172,644.

Patented Jan. 25, 1876.

FIG. 1.

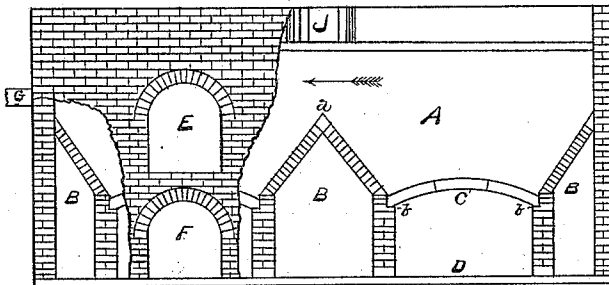


FIG. 2.

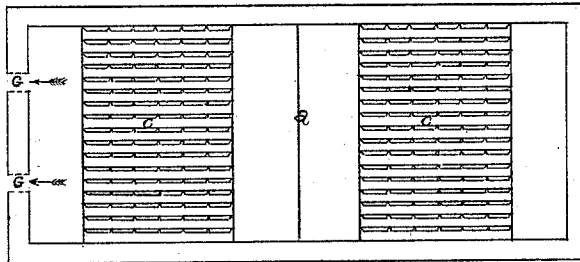
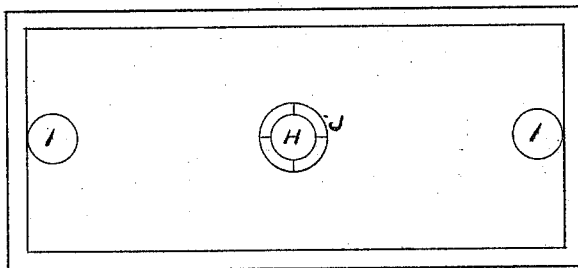


FIG. 3.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN A. MEAGLEY, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN FURNACES FOR BURNING WET FUEL.

Specification forming part of Letters Patent No. **172,644**, dated January 25, 1876; application filed December 8, 1875.

To all whom it may concern:

Be it known that I, JOHN A. MEAGLEY, of Binghamton, in the county of Broome and State of New York, have invented a new and useful Improvement in Furnaces for Burning Moist Tan-Bark, Sawdust, or other Similar Fuel, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to facilitate the combustion without materially increasing the draft by a new mode of the introduction and distribution of said material, in such a manner that the fuel shall automatically enter the furnace and be equally distributed over the grates, and its ashes descend by their own gravitation into the ash-pit.

The invention consists in a new construction and arrangement of parts, which will hereafter be fully described.

Figure 1 in the accompanying drawing is a side elevation of a furnace embodying my invention, with sections of the casing removed to show the inside arrangement. Fig. 2 is a plan of the same with the top of the furnace removed. Fig. 3 is a plan of the top in position, showing the openings for the reception of the fuel.

A is the furnace, which is lined with the ordinary fire-brick or other suitable lining. B B are conical division-walls, the apex *a* of which extend nearly to the top of the furnace. At the base of these walls are bearings *b b* for the support of the grates C C, which are made in the form of an arch over the ash-pits D D. These grates are made in sections of two or more pieces, and may be made of fire-brick or other suitable material. Their conical form has a tendency to prevent the fuel from accumulating in one place, and to cause the ashes to pass through into the ash-pit D. E E are openings for the doors of the furnace, and F F the openings for the ash-pits. G G are the flue-passages which communicate with

the boiler, which may be placed in contact with the furnace; or, if desired, the connections may be extended to a suitable distance from it. H is the opening for the reception of the fuel over the conical apex *a* of the central wall B. I I are end openings for the same purpose, and communicate with a floor or platform above by conductors J for the fuel, which conductors are made in sections of fire-brick.

When the central opening H is used the fuel passes down directly over the apex *a* of the wall B, at which point it separates, passing down over the inclined sides, which distributes it equally over the grates C to the top of their arch. The openings I I are then used, which supplies the opposite sides of the grates in the same manner; or they may all be used at the same time. The furnace is first heated for use by the ordinary prepared fuel, after which the openings E are closed, and the wet tan or sawdust is introduced, as described, when all the draft-openings may be partially closed, except the one farthest from the boiler, by which means the intensity of the heat is increased until it enters the boiler-flues G.

I am aware that there were Letters Patent granted to Felix Dannoy, dated December 21, 1858, No. 22,353, and to Charles Norris, dated February 14, 1860, No. 27,146, which are similar in appearance to my invention, but entirely different in construction. I therefore disclaim any devices shown in said patents.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the sloping walls B in the furnace A, directly under the receiving-openings H and I, with the arched or curved grate C, all constructed substantially as herein described, for the purpose set forth.

JOHN A. MEAGLEY.

Witnesses:

J. C. ROBIE,
L. B. SMITH.