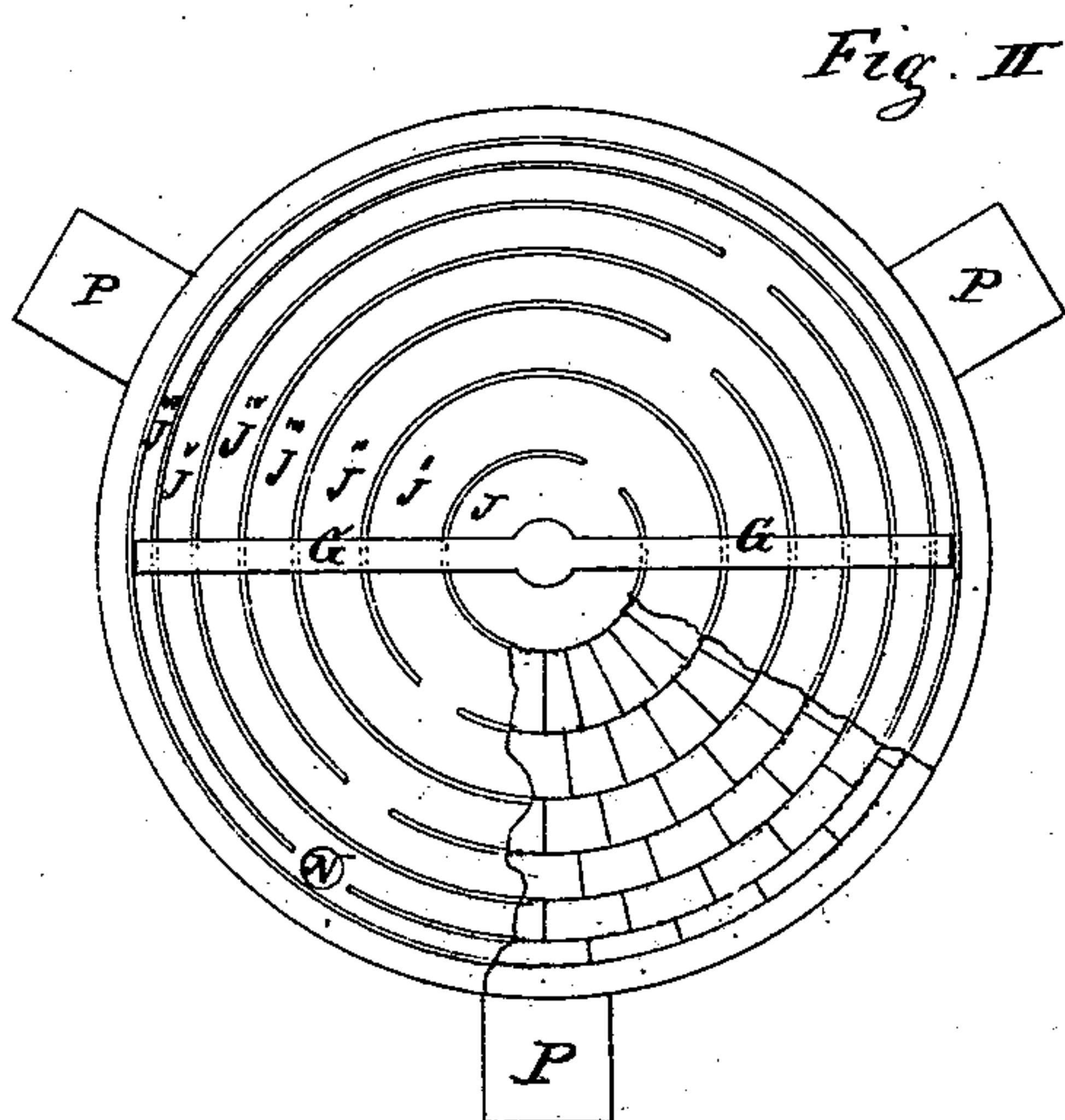
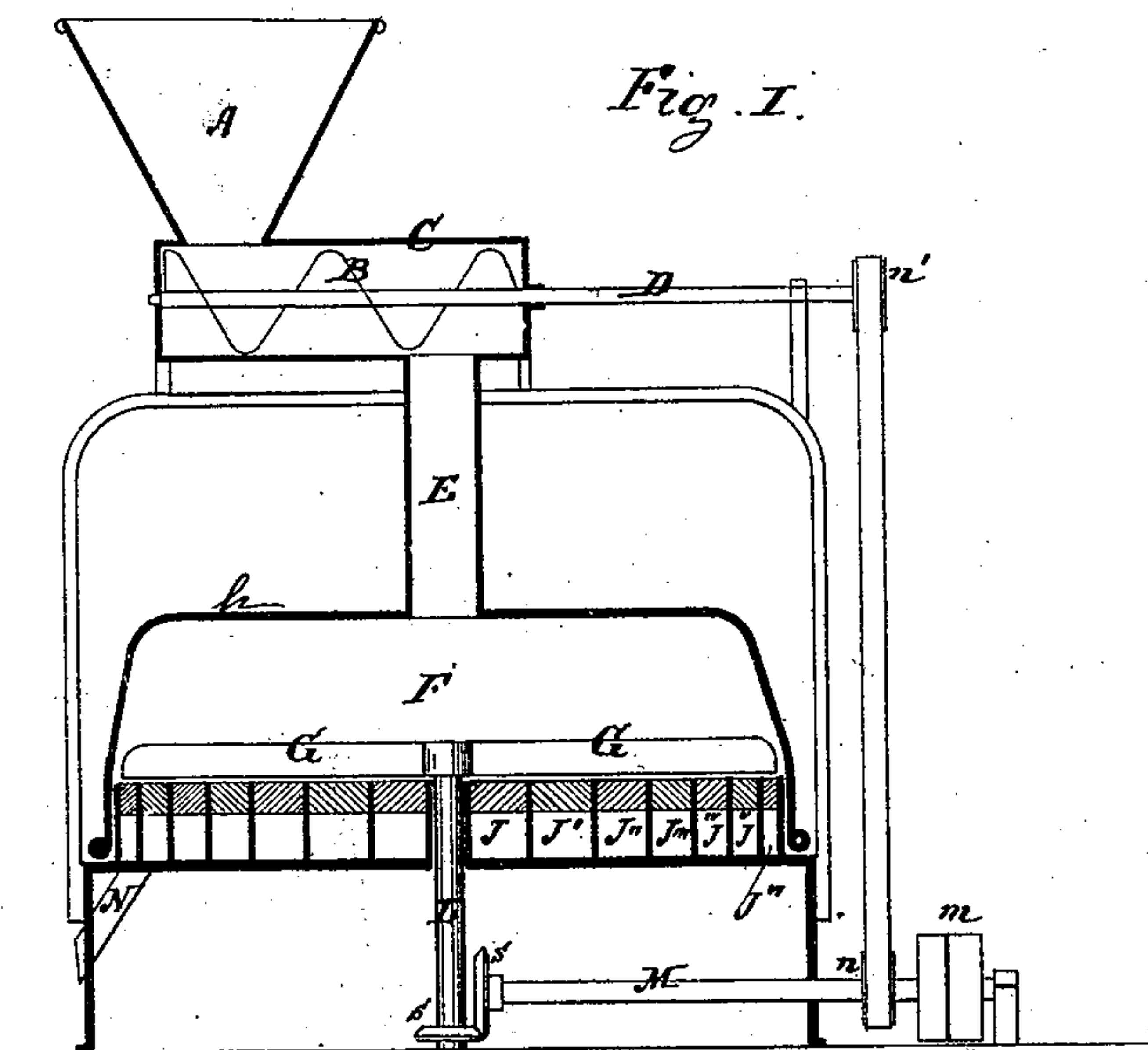


R. P. WILSON.

Apparatus for Desulphurizing Ores.

No. 226,692.

Patented April 20, 1880.



Witnesses.

L. H. Colburn
G. H. Walsh

Inventor.

Riley P. Wilson

UNITED STATES PATENT OFFICE.

RILEY P. WILSON, OF NEW YORK, N. Y.

APPARATUS FOR DESULPHURIZING ORES.

SPECIFICATION forming part of Letters Patent No. 226,692, dated April 20, 1880.

Application filed June 12, 1879.

To all whom it may concern:

Be it known that I, RILEY P. WILSON, of the city, county, and State of New York, have invented certain Improvements in Apparatus for Desulphurizing Ores, constructed of iron or any suitable material; and I do hereby declare that the following is a full and an exact description thereof.

The nature of my invention consists in constructing the flues of a muffled oven for desulphurizing ores in such a manner that the heat shall be most intense at the circumference, which is accomplished by graduated flues growing narrower from center outward.

It is found by actual operation where the flues are of even width and size from center outward that the heat drives the moisture centrally and has a tendency to cake up the ore, so that a perfect desulphurization cannot be effected; but where the flues are wider at the center this caking does not take place, as the ore being roasted is more gradually heated. This arrangement and construction of the flues, although apparently very simple, still in operation are of great value.

In the accompanying drawings, Figure I represents a sectional view of the entire apparatus.

A indicates the hopper; B, the feeder; F, the oven; E, the feed-pipe; G G, hollow arms or pipes for stirring the ore, carrying it at the same time gradually outward and distributing the air into the ore through vertical teeth at the practical point and time.

L is the hollow shaft by which the arms G

G are revolved, and through which the air is conducted.

J J' J'', &c., are flues gradually narrowing from center outward, through which the heat and draft are conducted from the furnaces P P P, as seen in Fig. II, these flues being immediately beneath the floor of the oven F.

h is a muffler, arch, or cover of the oven F. E is the inlet of the ore, passing into muffler h. D is the shaft driving feeder B. M is shaft driving shaft L. N is ore-outlet after being desulphurized.

The operation is as follows: The crushed ore is put into hopper A and conveyed gradually by feeder B into oven F, and then is conveyed gradually from center to circumference, being thoroughly and rapidly roasted in passing. The ore then passes out through spout N into a receiver to be amalgamated or otherwise treated.

I am aware that there are other muffle-furnaces constructed so that the heat is distributed in an even manner. I disclaim such apparatus, and claim only graduated flues in combination with a muffled furnace.

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

The graduated flues J' J'', in combination with the muffle-oven F, for the purposes set forth.

RILEY P. WILSON.

Witnesses:

GEORGE W. WALSH,
JAS. D. THORNLEY.