

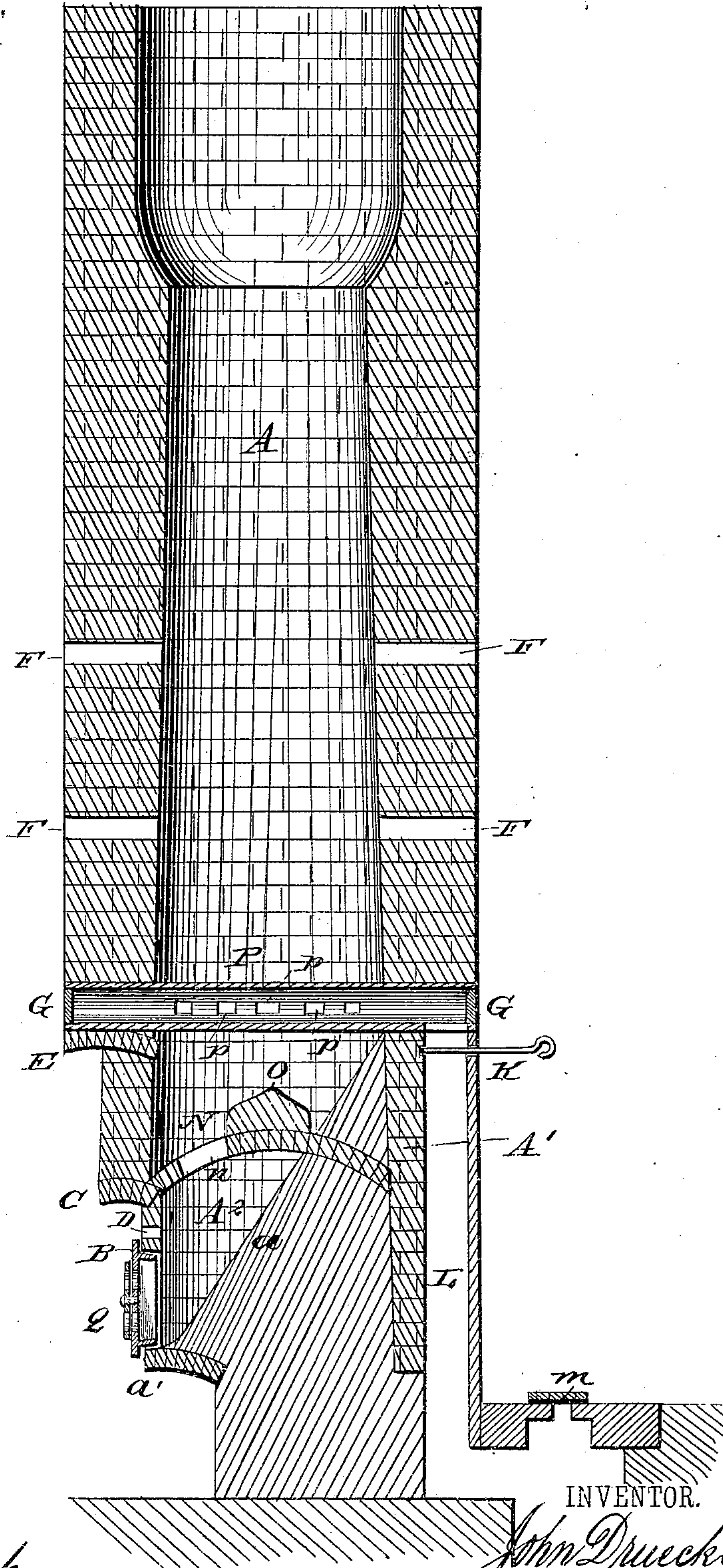
(No Model.)

J. DRUECKER.

LIMEKILN.

No. 258,725.

Patented May 30, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN DRUECKER, OF CHICAGO, ILLINOIS.

LIMEKILN.

SPECIFICATION forming part of Letters Patent No. 258,725, dated May 30, 1882.

Application filed March 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN DRUECKER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Limekilns; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification, and which represents a vertical sectional view of my improved kiln.

My improvement has relation to kilns for burning lime by gas, the gas being produced from coal-screenings or other material; and it consists in the detailed construction and arrangement of parts of the kiln as hereinafter more fully described and claimed.

The body of the kiln (shown at A) in which the limestone is placed, is preferably oval in cross-section, and is provided with vertical rows of apertures F, through which iron bars may be inserted to poke down the lime as it is burned, and thus prevent choking of the kiln; and through these apertures or loop-holes the stage of the fire within the kiln may be inspected when desired. Between the body A of the kiln and the discharge-hopper A² is the horizontal gas-channel P, which has a series of apertures, p, for the escape of the gas into the kiln. Gas is fed into the horizontal channel P through a vertical duct, L, which extends down to the gas-holder or gasometer, and which has an aperture, m, closed by a single course of brick for cleaning out the duct when desired.

The lower part of the front wall of the kiln is reduced to form two arches, E and C, the upper arch, E, supporting the body of the front wall, while the lower arch, C, supports one end of a brick-arch, N, built at right angles to arches E and C, the other end of which rests in the back wall, A'. Upon this arch is placed a saddle, O, the object of which is to prevent the burned lime from falling down too rapidly through the discharge-opening n in the arch by breaking the bulk or body of burned lime as

it tumbles down upon the inclined plane a, which is built up upon the kiln-base or foundation, and has at its front part an arch, a', under which a wheelbarrow may be pushed to receive the lime as it is discharged through the door B. Above the latter is an aperture, D, through which iron bars may be inserted for the purpose of regulating the discharge of burned lime through the door, and the door is provided with a register or draft-hole, Q, for feeding cold air to the kiln in sufficient quantity to burn the gas and cool the burned lime off as it accumulates in the hopper or lower part of the kiln. The flow of gas is regulated by a damper, R, at the upper end of the gas-duct or feed-pipe L.

At each end of the gas-channel P is an opening, G, closed when the kiln is in operation by a single course of brick, by removing which the channel or passage P may readily be cleaned out.

By this construction and arrangement of the kiln I save fuel and provide for the thorough burning of the stone, while the burned lime has sufficient time to cool off after it has passed the gas-channel to make it fit to be dumped directly into the wheelbarrows and taken by them to the cars without requiring rehandling.

I claim and desire to secure by Letters Patent of the United States—

In a gas-burning limekiln, the inclined base a, in connection with the front or face wall having the arched offsets a', C, and E, and the bridge or inside arch, N, supporting the saddle O, and spanning the enlarged lower part of the kiln below the gas or burner channel P between the back wall, A', and front arch, C, said arches N and C being at right angles to one another, substantially as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN DRUECKER.

Witnesses:

FREDERICK A. SMITH,
FRANK W. HATCH.