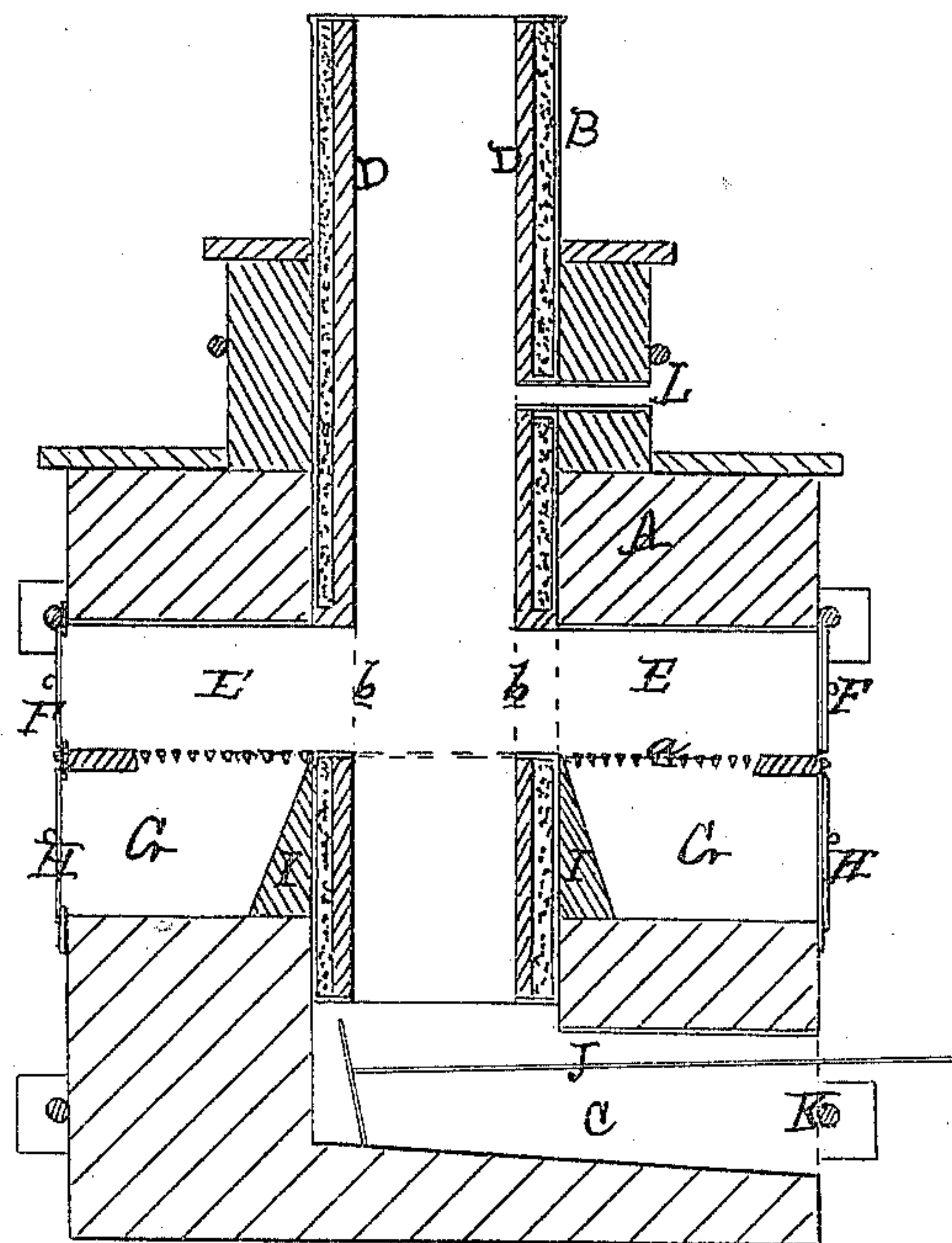
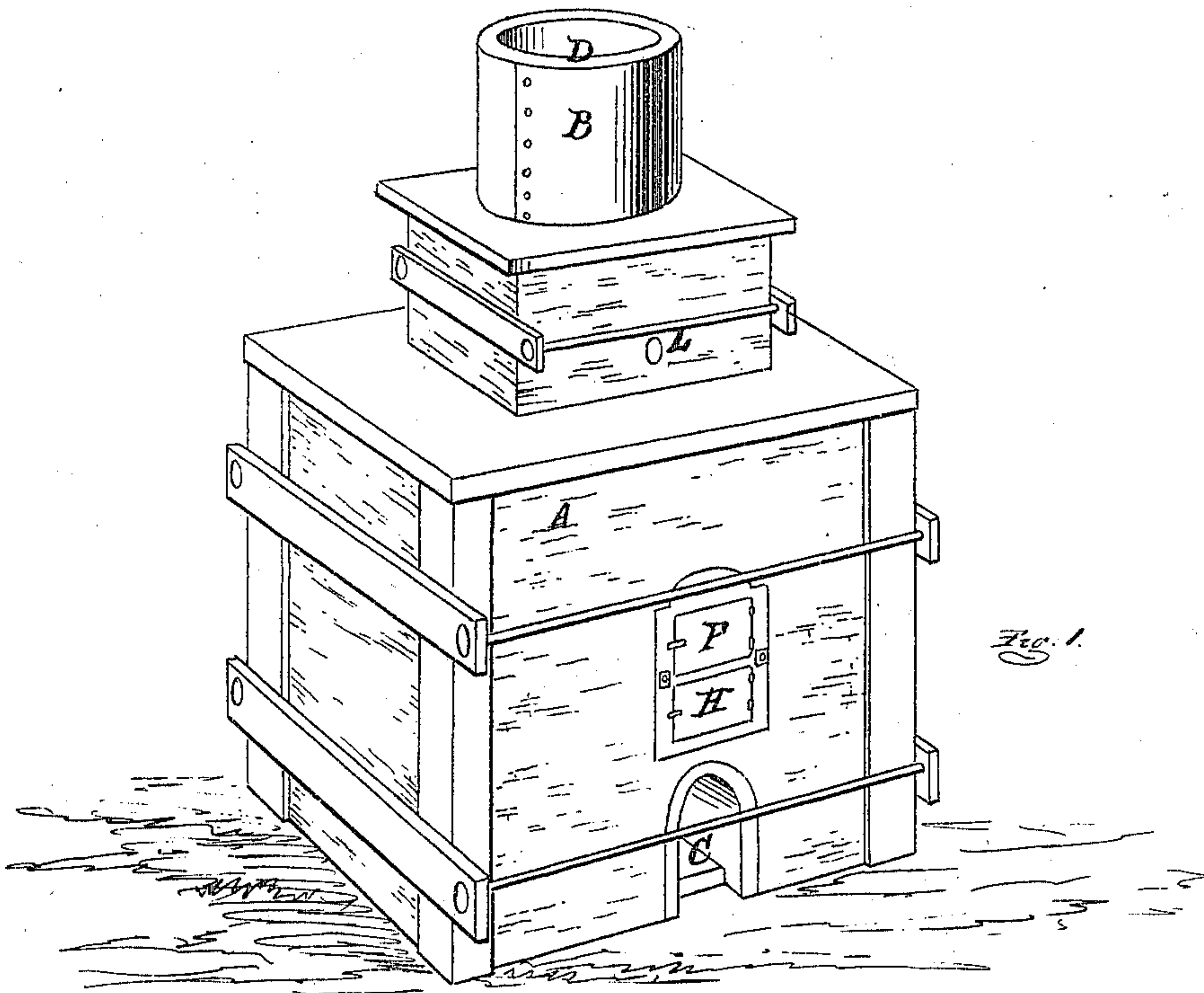


J. CORYEON.  
Lime-Kilns.

No. 134,421.

Patented Dec. 31, 1872.



ATTEST:  
Chas. A. Hunt  
J. R. Riddle

INVENTOR:  
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Wm. S. Sprague

# UNITED STATES PATENT OFFICE.

JOHN CORYEON, OF BAY CITY, MICHIGAN.

## IMPROVEMENT IN LIME-KILNS.

Specification forming part of Letters Patent No. 134,421, dated December 31, 1872.

*To all whom it may concern:*

Be it known that I, JOHN CORYEON, of Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in Perpetual Lime-Burning Kilns; 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 a perspective, and Fig. 2 a vertical section, of my kiln.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in the construction of what are usually termed "perpetual lime-kilns," so arranged as to economise both labor and fuel in the manufacture of lime. The invention consists in the peculiar construction and arrangement of the various parts, as more fully hereinafter described.

In the accompanying drawing, A represents the body of the kiln, constructed of masonry or otherwise, as is most convenient. B is a metallic flue, extending from the lime-pit C upward through the center of the body of the kiln and a short distance above the top thereof. Within this flue, and so as to leave a space between it and the lining, is a lining of brick, D, and the space between said lining and flue is filled with leached ashes, preferably, although sand may be employed. I find the former to be the best non-conductor to preserve the metallic flue from the action of the heat. E are fire-boxes, provided with a floor or grate, *a*, and extending through the body of the kiln to corresponding openings *b* in the

metallic flue and lining. These fire boxes or chambers are provided with suitable doors F through which the fire is fed. G are ash-pits, provided with draft-doors H. The rear wall I of these ash-pits is built with an incline, as shown, to increase the draft at the point where the fire-boxes communicate with the flue. Care should be taken when feeding the fire that the draft-doors H should be opened. J is a rake or suitable implement for removing the lime from the pit C through the opening K in the base of the body of the lime-kiln.

The stone to be converted into lime is thrown into the top of the flue, and the fires made in the fire-boxes, whose connections with the flue are opposite each other. As the stone is converted it falls into the lime-pit. As it falls the stone above the fire-boxes and in the flue frequently becomes choked by forming an arch. To break this and compel the unburned stone to present itself to the action of the fire an opening, L, is made through the wall of the kiln and flue, through which a poker or rod may be inserted for the purpose.

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

1. In ash-pits in lime-kilns, the inclined back wall I, for the purposes specified.
2. The arrangement of the body A, flue B, lining D, fire-boxes E, ash-pits G, lime-pit C, and opening L, when each part is constructed to operate substantially as described.

JOHN CORYEON.

Witnesses:

EDWARD JOHNSTON,  
THOS. S. SPRAGUE.