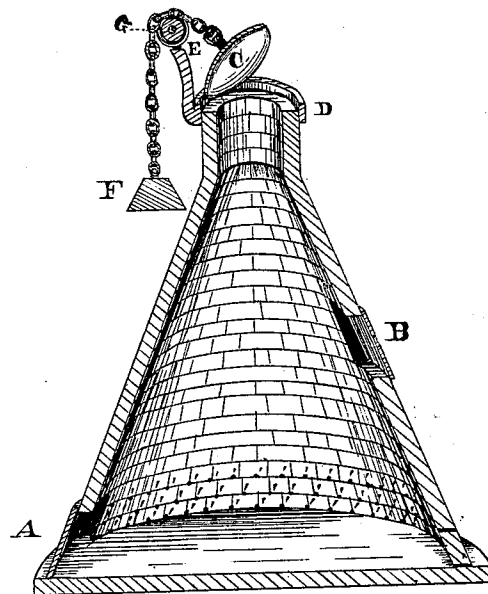


B. KANE.  
CHARCOAL KILN.

No. 178,855.

Patented June 20, 1876.



Attest  
L. H. Summell  
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Inventor  
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# UNITED STATES PATENT OFFICE.

BART KANE, OF CINCINNATI, OHIO, ASSIGNOR TO CINCINNATI CHARCOAL COMPANY.

## IMPROVEMENT IN CHARCOAL-KILNS.

Specification forming part of Letters Patent No. **178,855**, dated June 20, 1876; application filed October 13, 1875.

*To all whom it may concern :*

Be it known that I, BART KANE, of Cincinnati, Ohio, have invented certain Improvements in Charcoal-Kilns, of which the following is a specification:

The object of my invention is to carbonize wood into charcoal in greater quantities by the burn, and more effectually, and in less time than by the old process of burning in earth; and further, to produce a charcoal free from dirt, leaves, and twigs, as well as to save the pyroligneous acid eliminated from the wood.

My invention consists in a brick or stone kiln of any size, though one of a conical shape of dimensions specified would be the best—that is to say, thirty feet in diameter, outside measurement at the base, by thirty feet high, and five feet wide at the neck, which should be from two to three feet long. The walls should be twelve inches thick, though any thickness capable of resisting the expansion, contraction, and pressure would answer. There should be one or more doors, say, of iron, arranged with a view to convenience in filling and emptying the kiln, and of a size and shape to suit the builder. In the conical kiln of dimensions specified it would perhaps be better to have at least two doors, one in the front base A, and the other about twelve feet from the base B. Door A should be, say, five feet wide at the base by six feet high, and four feet wide at the top, with a gradual taper on each side from top to bottom. Door B should be, say, five feet wide at its base by five feet high, and four feet wide at the top, with the taper above described.

At intervals around the base of the kiln holes should be left, of a number and size commensurate with the size and shape of the kiln. For a kiln of dimensions specified three rows about eighteen inches apart, encircling the kiln with holes about three feet apart, and about two by four inches in size, would probably give the most satisfaction. The top of the kiln should be air-tight.

My invention further consists in a safety-valve, to give vent to the concussion caused by the ignition of the gases, which frequently occurs.

The best description of valve would be the one in figure, namely, a sheet-iron lid, C, working on a hinge, and fitting loosely into a rim, D, with a rope or chain, E, attached to the lid, and passing over the roller G, which is, say, two and one-half feet above the top of the kiln, suspending a weight, F, which is just heavy enough to allow the lid to fall back to its place after being raised.

The roller may be suspended by an upright piece.

At the point where the lid comes in contact with the kiln it would be best to chink with clay or mortar, in order to make it air-tight.

I claim as my invention—

A kiln for making charcoal, of conical shape, with air-tight top, doors A and B, and the holes around its base, substantially as and for the purpose described.

BART KANE.

Witnesses:

ALBERT PADDACK,  
L. H. PUMMILL.