

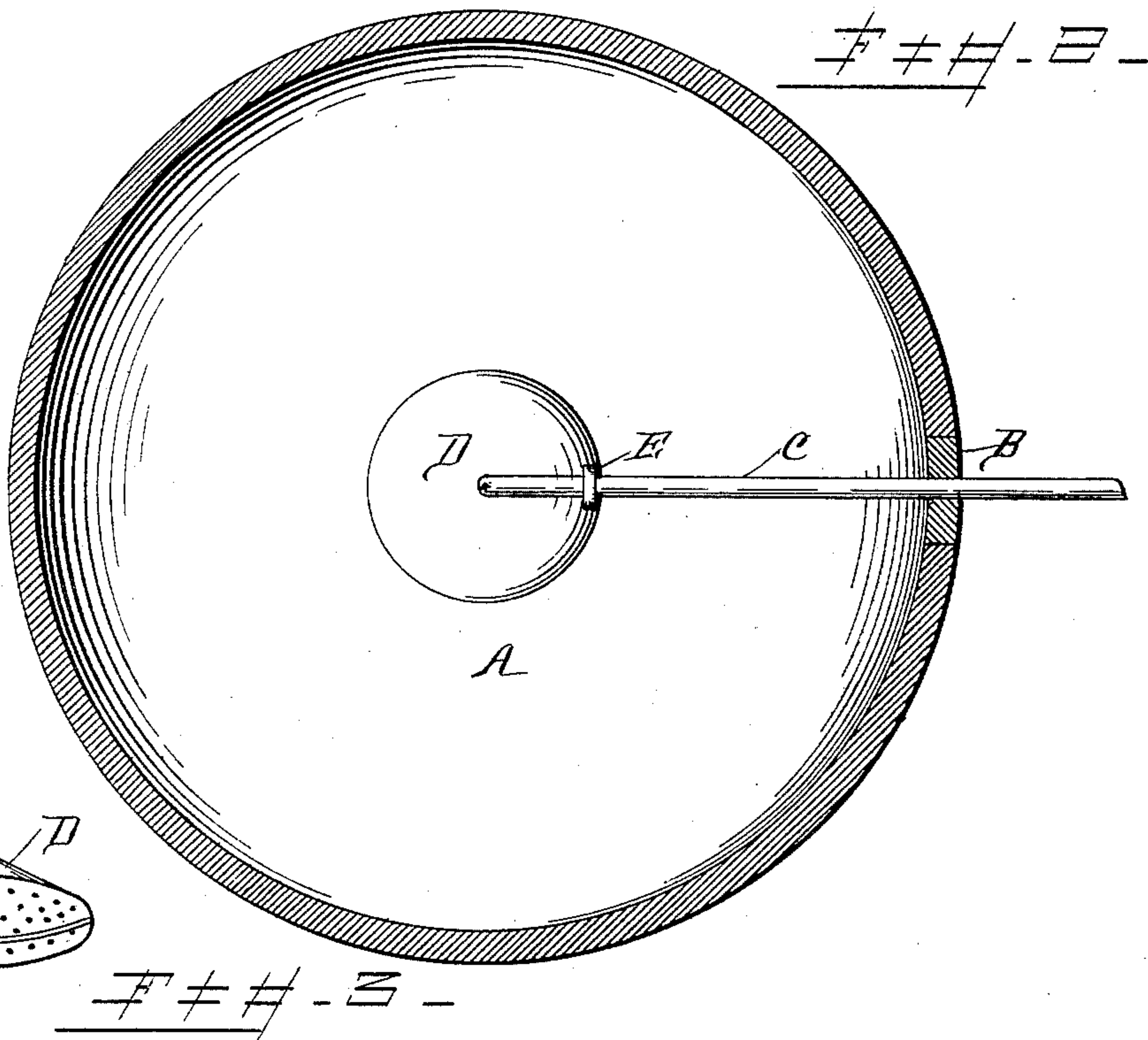
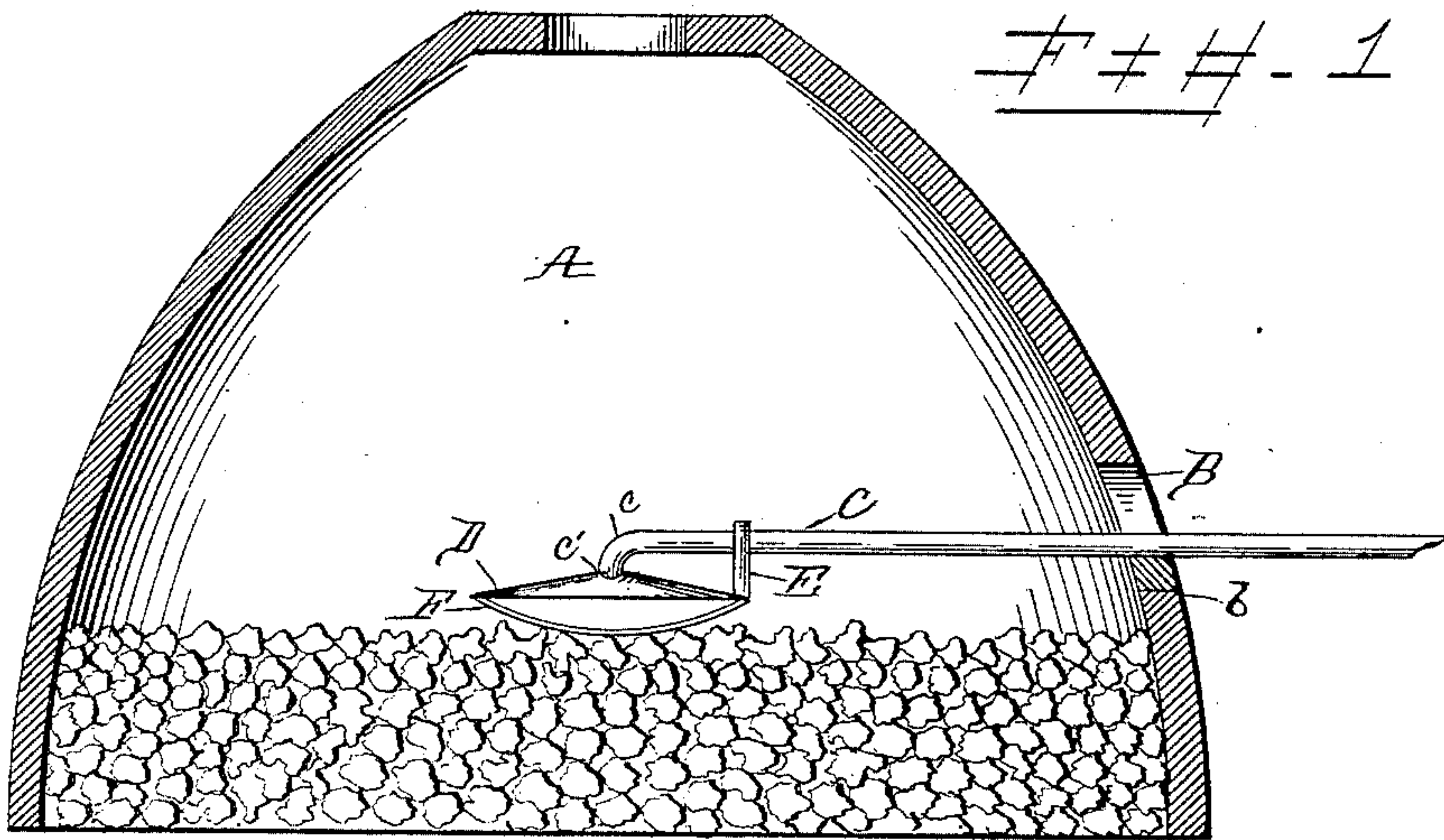
(No Model.)

D. R. MURPHY.

APPARATUS FOR COOLING COKE.

No. 394,127.

Patented Dec. 4, 1888.



WITNESSES—
Arthur B. Blackwood.
Louise Paul.

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By *Connolly Bros. Atty.*

UNITED STATES PATENT OFFICE.

DANIEL R. MURPHY, OF GREENSBURG, PENNSYLVANIA, ASSIGNOR OF ONE
HALF TO MORRIS L. PAINTER, OF SAME PLACE.

APPARATUS FOR COOLING COKE.

SPECIFICATION forming part of Letters Patent No. 394,127, dated December 4, 1888.

Application filed June 29, 1888. Serial No. 278,517. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. MURPHY, a citizen of the United States, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Cooling Coke; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to an apparatus for cooling coke in ovens, and has for its object the provision of means whereby coke can be readily cooled without cooling the oven.

This invention has for its further object to provide an apparatus for the uniform distribution of water over the charge of coke without the same coming in contact with the sides of the oven, thus leaving the oven hot and saving time for the next charge.

This invention has for its further object the provision of means of producing coke of a superior quality and also improving the general appearance of the same.

This invention still further consists in saving the wear and tear of the oven from fifty to seventy-five per cent. by not allowing the water to come in contact with it, thus preventing constant expansion and contraction, which is the ruination of the oven.

This invention therefore consists in the provision of a peculiar-shaped nozzle screwed to an elbow of a water-pipe by means of a thread and held more firmly in position by a brace the lower end of which is secured to the nozzle and the upper end of which embraces the pipe or water-conduit. This pipe also serves as a guide or means for manipulating the stream of water in any desired direction.

This invention still further consists in the novel construction, combination, and arrangement of parts, hereinafter more fully described, and specifically pointed out in the claims.

Reference is had to the accompanying drawings, wherein Figure 1 is a vertical sectional view of a "bee-hive" oven of the ordinary

construction equipped with my improvements. Fig. 2 is a longitudinal sectional view of the oven and top view of my apparatus. Fig. 3 is a perspective view of the nozzle.

A represents the oven; B, the opening for door; *b*, the base of same; C, the water-conduit, having the elbow *c*, which is secured at *c'* to the nozzle D.

E represents the brace which surrounds the pipe or water-conduit C and holds the nozzle in position.

F represents a guide attached to the under side of the nozzle to prevent the latter from contacting with the coke.

Operation: When the charge of coke is ready for cooling, the door of the oven is opened and my cooler inserted into the oven, being manipulated by means of the pipe C, which slides on the bar *b*, and the water allowed to flow over the coke. When the coke has sufficiently cooled, the apparatus can be easily removed and the coke is drawn. In the meantime the oven remains hot, and thus saves several hours' time on the next charge.

The use of my apparatus for cooling coke, consisting in leading the water-pipe through the door of the oven and then directly down upon the coke, not alone saves oven, water, and labor, but it can be done in about one-fifth the time it takes by the methods now used.

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

1. In an apparatus for cooling coke, the combination of the perforated nozzle D, having the brace E, water-conduit C, elbow *c*, bar *b*, and guide F, all arranged and operating substantially as described.

2. The combination of water-pipe C, elbow *c*, nozzle D, and guide F, attached to the nozzle D, substantially as described, and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of June, 1888.

DANIEL R. MURPHY.

Witnesses:

H. C. EVERT,
LOUIS MOESER.