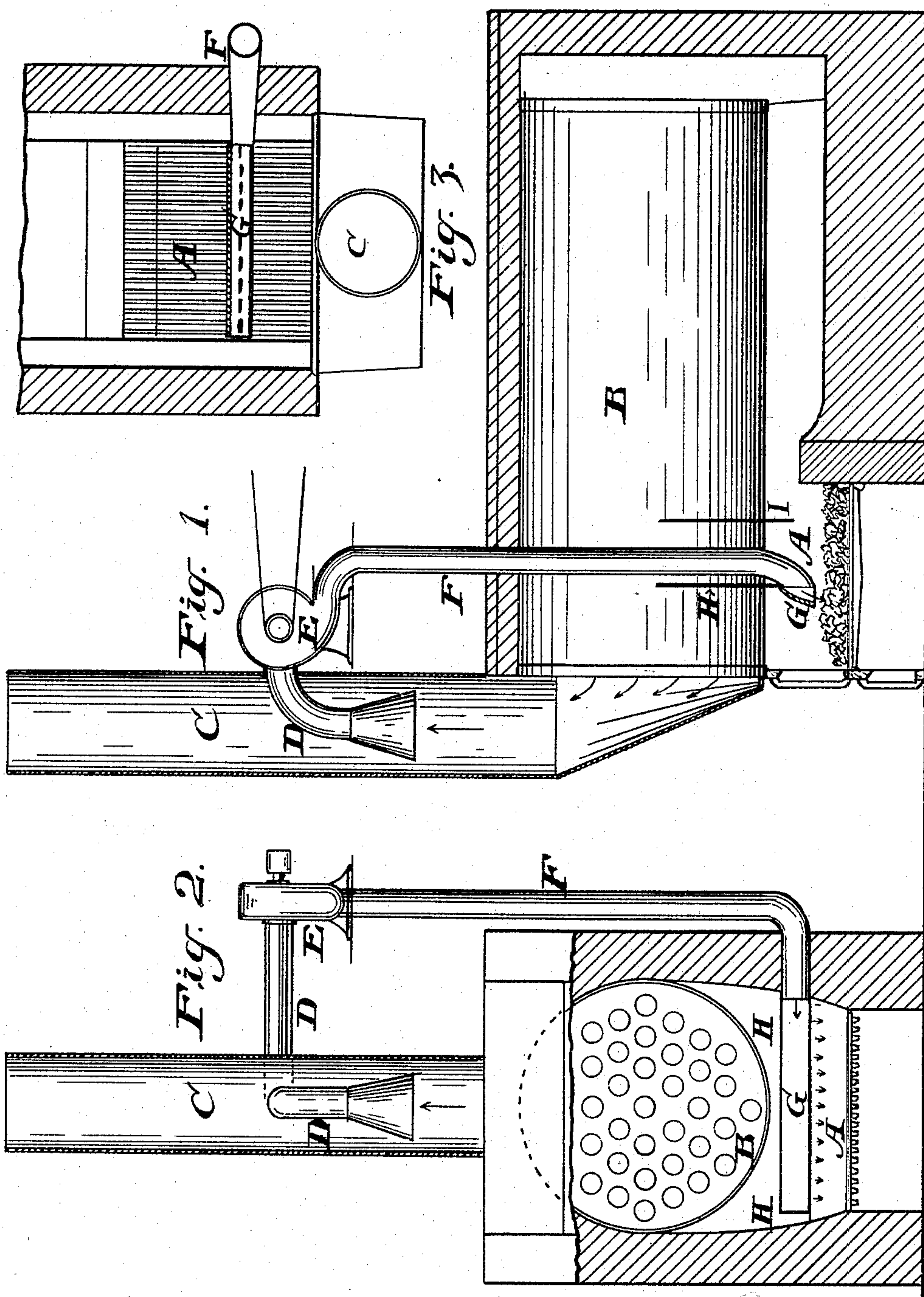


(No Model.)

P. DIEMER.  
SMOKE CONSUMER.

No. 497,018.

Patented May 9, 1893.



Witnesses,  
C. M. Lamm.  
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# UNITED STATES PATENT OFFICE.

PETER DIEMER, OF CLEVELAND, OHIO.

## SMOKE-CONSUMER.

SPECIFICATION forming part of Letters Patent No. 497,018, dated May 9, 1893.

Application filed December 19, 1892. Serial No. 455,725. (No model.)

*To all whom it may concern:*

Be it known that I, PETER DIEMER, a citizen of the United States, residing at Cleveland, Cuyahoga county, State of Ohio, have invented certain new and useful Improvements in Smoke-Consumers, of which the following is a specification.

This invention relates to smoke consuming and consists in providing a means of collecting the smoke and gases, produced by the furnace fire, from the chimney and returning it direct into the live fire, there to be consumed.

The invention consists in the combination of a blower suitably located for drawing through a pipe connecting it with the chimney, and forcing it through another pipe connecting the blower with the fire-place or furnace, substantially as hereinafter described and pointed out in the claims, and illustrated in the accompanying drawings, in which,—

Figure 1 is a longitudinal section of a boiler, furnace and smoke stack having my new apparatus attached. Fig. 2 is a cross-section of the same. Fig. 3 is a plan view of the furnace with side walls in horizontal section, showing location and relation of the discharge pipe over the fire grates.

A, in the several views represents a boiler furnace, B a boiler, and C the smoke-stack. Within the stack or chimney I provide a funnel mouthed pipe D, leading outward through the stack.

E is a fan-blower situated and supported in a suitable position outside of the stack to which power may be applied from any suitable source for operating.

F is a pipe connected with the blower and leading down to and into the furnace, and there connected with a discharge pipe or chamber, G, located over the fire. This discharge pipe may form part of or be attached to a depending deflecting plate H fixed to the bottom of the boiler. In the lower side of said pipe or chamber G is a slot or a row of holes through which the smoke and gases are discharged directly into the live fire. Back of the said deflector there may be provided a second deflector plate I, for the purpose of assisting in keeping the smoke and products of combustion down near the fire and retard their passage over the bridge wall.

From the foregoing it will be seen that the smoke and gases are arrested and returned to the furnace and are consumed instead of passing off out of the chimney to waste.

Having described my invention, I claim—

In a smoke consuming furnace the combination with boiler, furnace and stack, and pipe D having open funnel mouth located within the stack and a blower E and pipe F of the discharge pipe G, extending over the live fire and a deflector plate H over said discharge pipe closing the space above said pipe and the bottom of the boiler substantially as and for the purpose specified.

PETER DIEMER.

Witnesses:

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