

CHARLES DASINBROCK.

Improvement in Cleaning Boiler Flues by Steam Jets.

No. 119,581.

Patented Oct. 3, 1871.

FIG. 1.

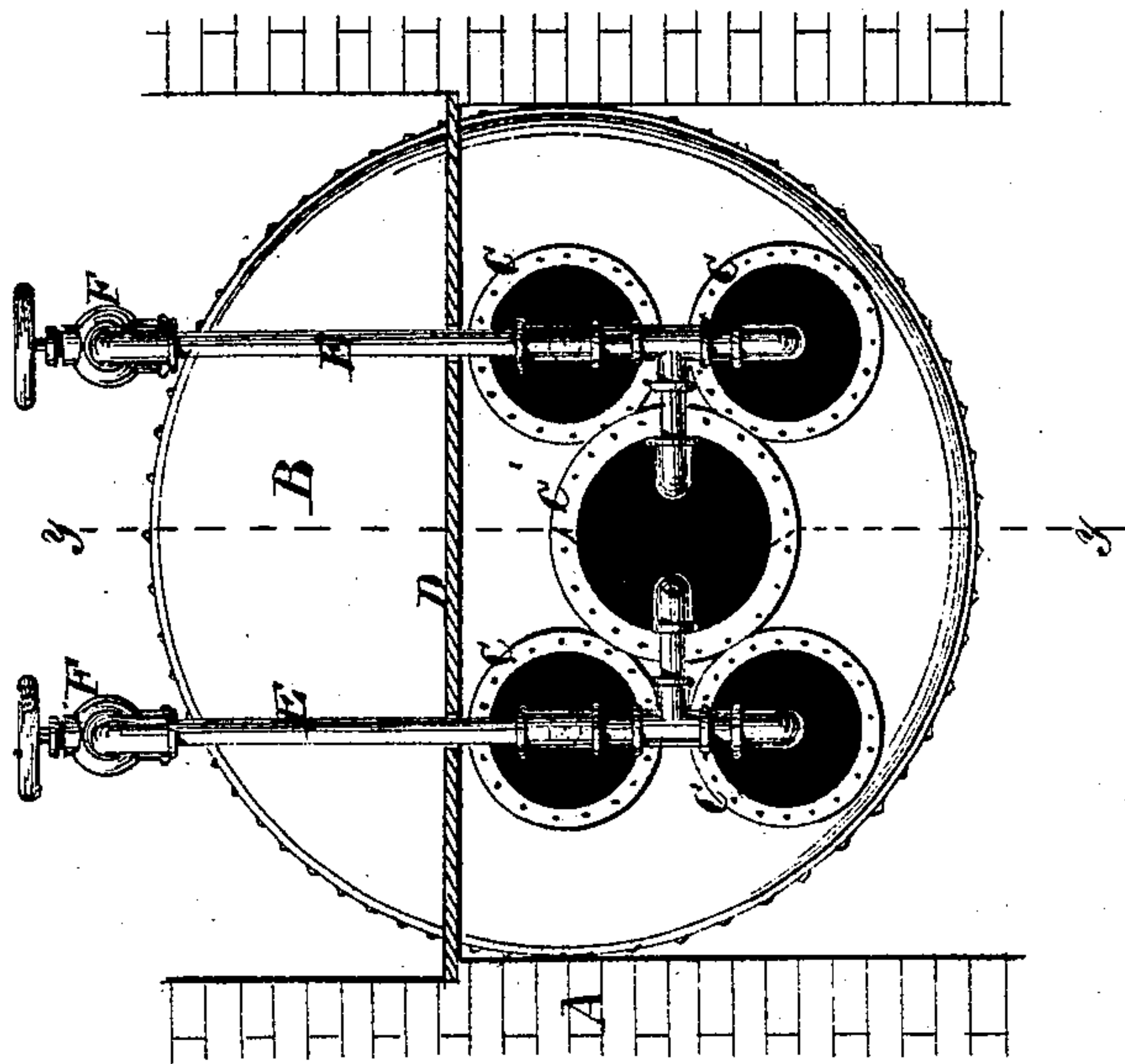


FIG. 2.

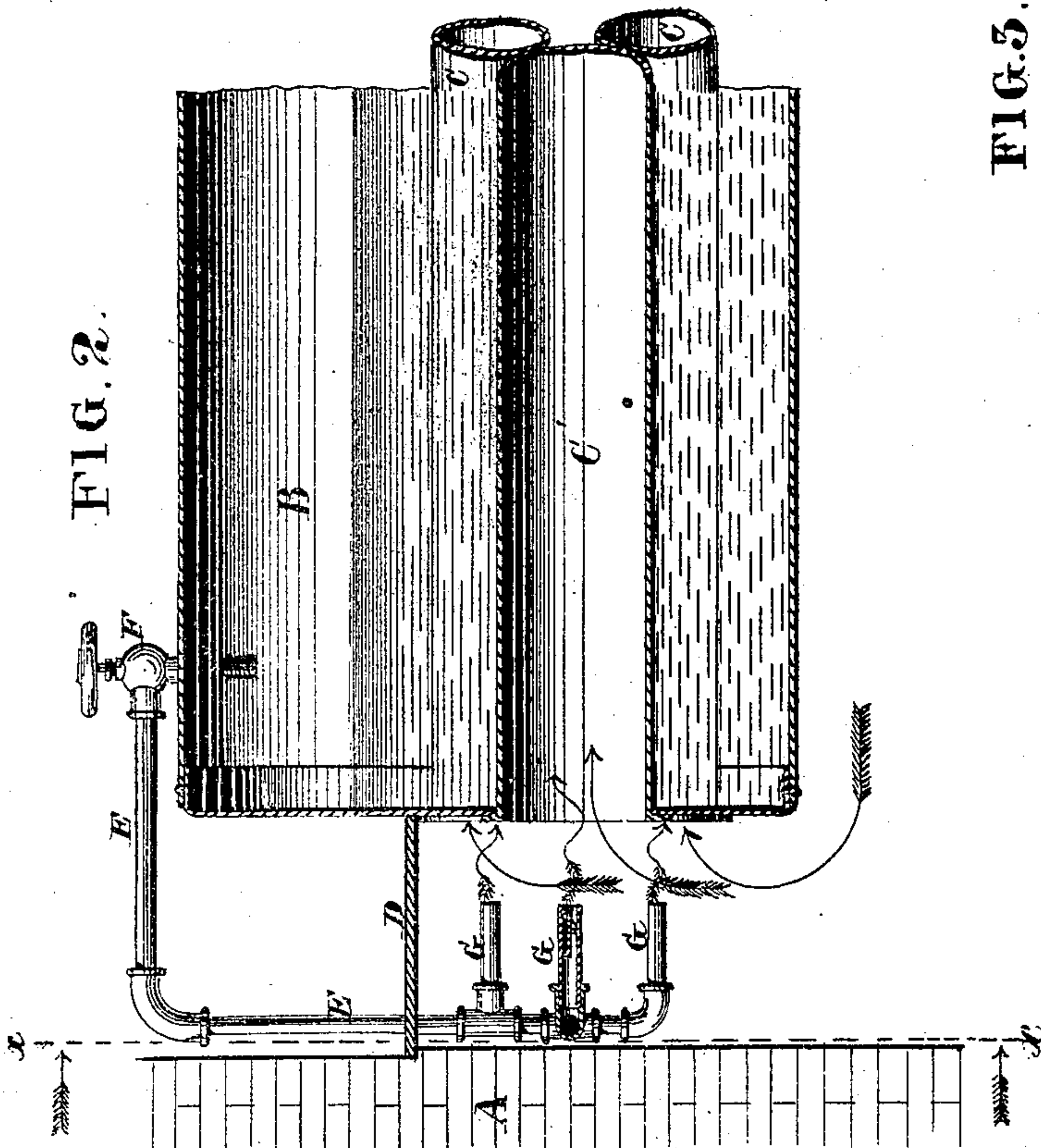
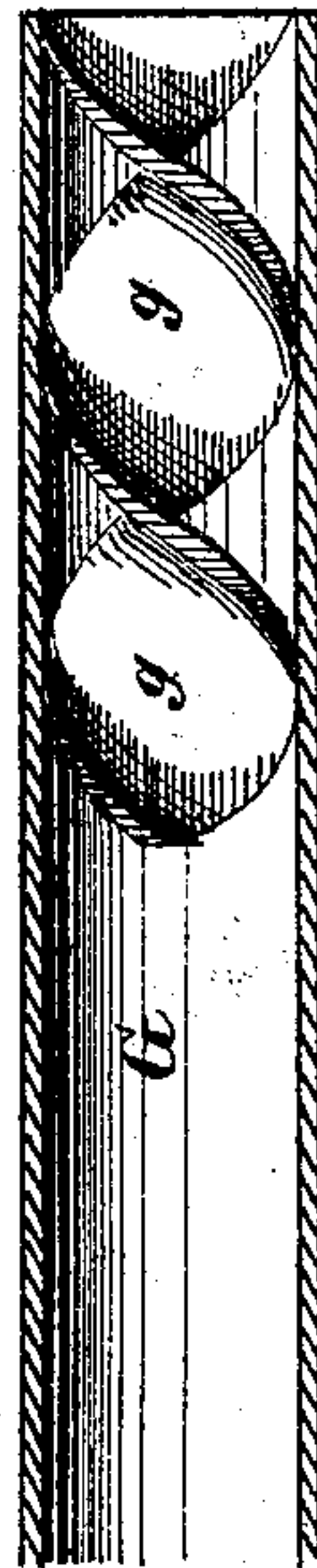


FIG. 3.



ATTEST
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IMPROVEMENT IN CLEANING BOILER-FLUES BY STEAM-JETS.

Specification forming part of Letters Patent No. 119,581, dated October 3, 1871.

To all whom it may concern:

Be it known that I, CHARLES DASENBROCK, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain Improvements in Boiler-Flue Cleaners, of which the following is a specification:

My invention relates to that class of boiler-flue cleaners in which steam-pipes are employed to discharge jets into the flues so as to remove soot and other matter from the interior surface thereof; and it consists in a novel arrangement of the said steam-pipes in relation to the boiler-flues and rear crown-plate of the furnace, so that the pipes will be protected from excessive heat, which, under the usual mode of applying such pipes, causes their rapid destruction.

Figure 1 is a rear elevation of a five-flue boiler with my invention applied, the crown-plate being shown in section at *xx*, Fig. 2. Fig. 2 is a vertical longitudinal section on the line *yy*, Fig. 1. Fig. 3 is a longitudinal section of one of the discharge-nozzles on a larger scale.

A A are parts of the wall of the furnace, and *B* a part of a boiler constructed with horizontal flues *C C'*. *D* is a crown-plate, extending from the rear end of the boiler to the back wall directly above the flues *C*, and constituting the top of the rear smoke-chamber. *E E* are steam-pipes inserted in the top of the boiler, and provided with stop-valves or cocks *F* of common construction. From these cocks the pipes extend horizontally backward nearly to the rear wall, where they are formed with elbows. From thence they ex-

tend downward close to the rear wall, and through openings in the plate *D* to the level of the flues *C C'*. Precisely in line with the respective flues horizontal nozzles *G G* are connected with the pipes *E*. These nozzles do not extend within the flues or sufficiently near the same to be exposed to excessive heat; but by their position are adapted to discharge their jets of steam into said flues so as to effect the desired result with complete success. Spiral plates *g* (Fig. 3) are applied within the nozzles in order to impart a vertical or circular movement to the issuing steam.

Steam-pipes and nozzles applied as above described are found to last many times longer than when arranged in the usual manner within the flues and exposed to the intense heat of the furnaces.

I use one or more main pipes with branches disposed in any manner which the construction of the boiler and the arrangement of the flues may require.

I claim as my invention—

The arrangement of the steam-pipe or pipes *E* and nozzles *G* in relation to the boiler *B* and flues *C*, as herein shown and described, so as to leave a space between the ends of the nozzles and the flues, and thus permit the passage of the gaseous products of combustion without exposing the nozzles to excessive heat.

CHARLES DASENBROCK.

Witnesses:

OCTAVIUS KNIGHT,
EDWARD H. KNIGHT.

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