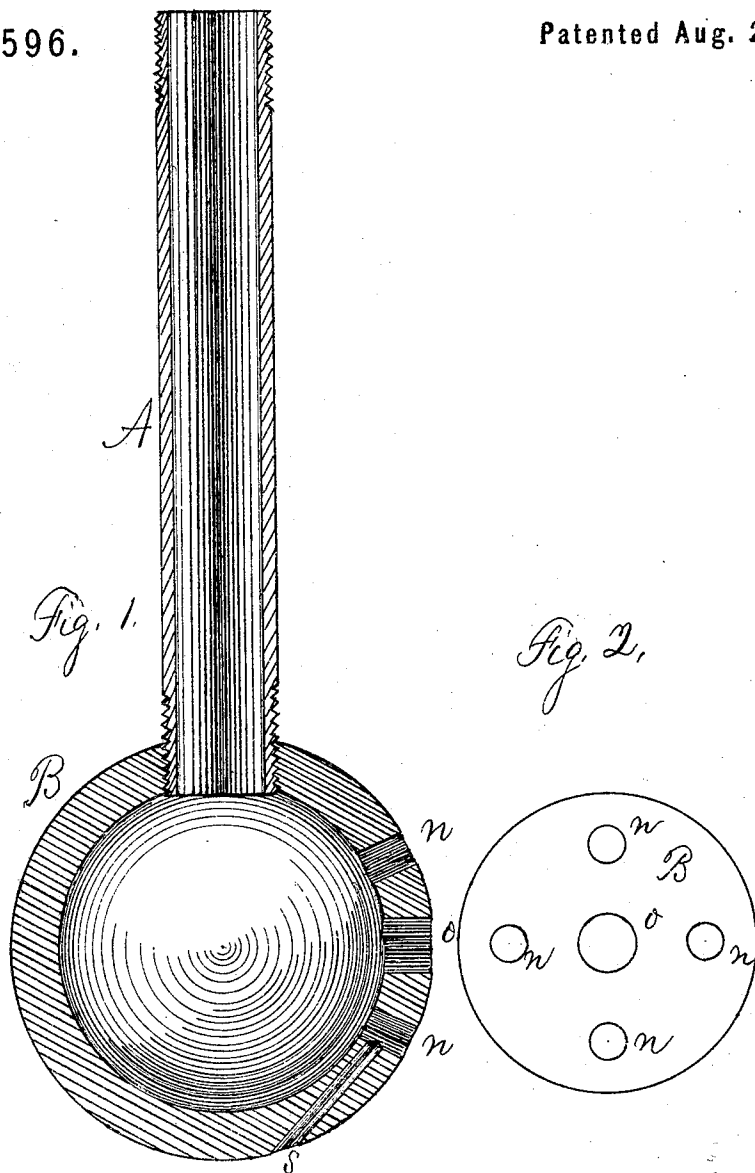


[72.]

William Doty's Steam Flue cleaner.

No. 118,596.

Patented Aug. 29, 1871.



Witnesses.

W. H. Clark
B. Pickering

William^{his} Doty
mark

UNITED STATES PATENT OFFICE.

WILLIAM DOTY, OF CIRCLEVILLE, OHIO.

IMPROVEMENT IN STEAM FLUE-CLEANERS.

Specification forming part of Letters Patent No. 118,596, dated August 29, 1871.

To all whom it may concern:

Be it known that I, WILLIAM DOTY, of Circleville, in the county of Pickaway and State of Ohio, have invented a Steam Flue-Cleaner, of which the following is a specification:

My invention relates to that class of flue-cleaners in which jets of steam are used to effect the purpose.

Figure 1 is a view of the cleaner divided through its center. Fig. 2 shows the relation of the several orifices through which the steam jets.

A is a steam-pipe, which is extended to communicate with the upper part of a steam-boiler, and the lower end is secured into the sphere B, which is held suspended near to and directly opposite the center of the boiler-flue at the rear end. The sphere is a hollow cast-iron globe, having an orifice at the top for the steam-supply pipe, orifices *n* and *o* for steam-jets, and an orifice, *s*, for the escape of water which may condense within the sphere. The orifice *o* is on a direct horizontal line to the center, and about this is a series of orifices on direct line to the center also, causing the steam-jets to diverge and sweep the surface of the flue, while the direct jet from the center orifice (see *o*, Fig. 2) sweeps the flue of the soot. *s* is an orifice drilled from the under side into the orifice *n*, through which the water may escape when sufficiently cooled down to produce con-

densation of the steam, which may escape through a supply-cock that is arranged in the pipe just outside of the boiler. The object of the orifice *s* is to convey the water from the sphere just outside of the boiler-flue that the flue may not become oxidized and the soot moistened, which would cause its adherence to the surface of the flue. The relation of the sphere to the flue is such that if water were carried out of the jetting orifice it would fall within the flue, to the detriment thereof. The angle of this orifice is such that the steam will not issue through it. The sphere being suspended near the center of the boiler-flue and within the flue-space at the rear end of the boiler, it is kept at about a red heat, and therefore only dry steam can issue from it at such times as the force of the steam would be effective for cleaning the flue.

On opening the stop-cock the steam passes through the pipe into the sphere and thence into the flue.

I claim as my invention—

The water-escape channel *s*.

WILLIAM ^{his} DOTY.
mark.

Witnesses:

W. H. CLARK,

B. PICKERING.