March 10, 1925. 1,529,055

D. J. DORSEY

SOOT BLOWER

Filed Nov. 16, 1922

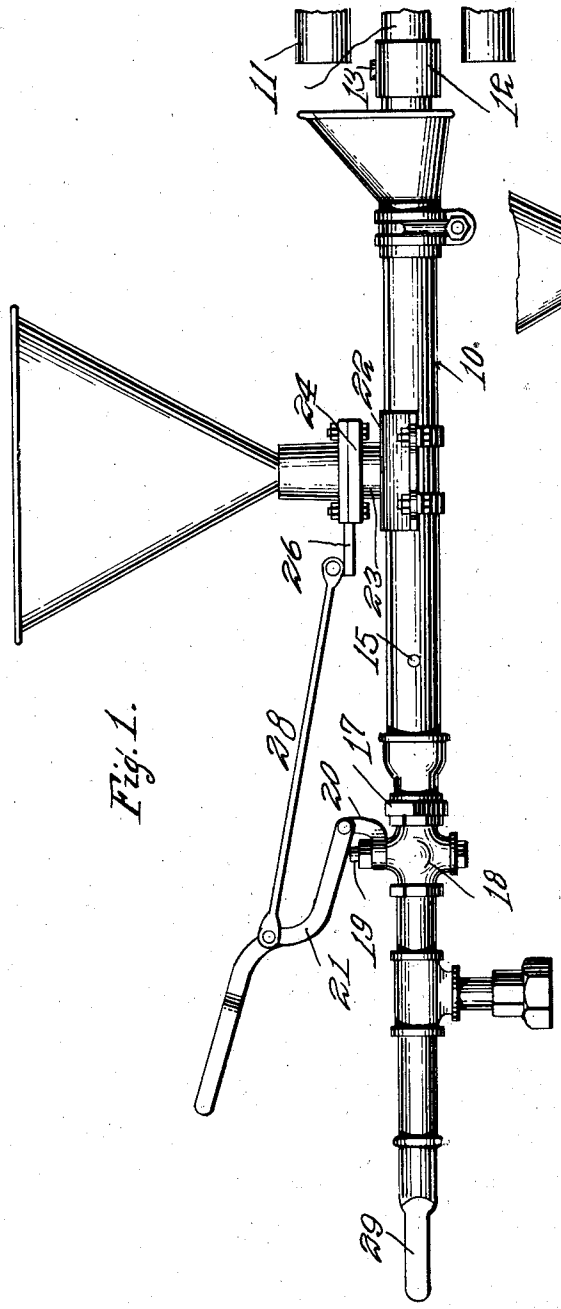


Fig. 1.

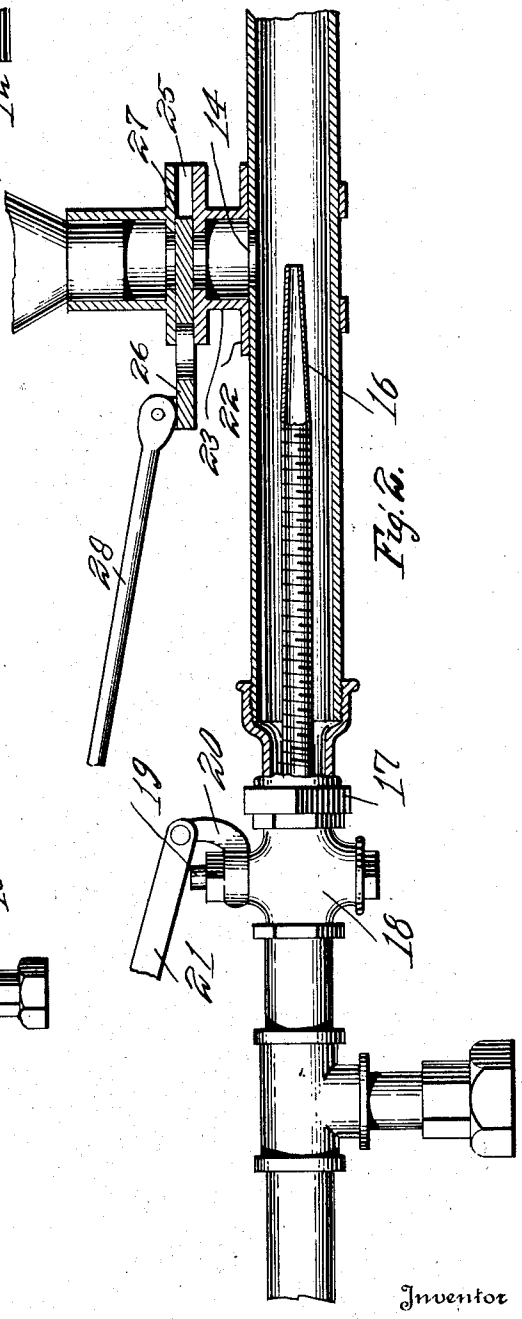


Fig. 2.

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UNITED STATES PATENT OFFICE.

DAVID J. DORSEY, OF BATON ROUGE, LOUISIANA.

SOOT BLOWER.

Application filed November 16, 1922. Serial No. 601,429.

To all whom it may concern:

Be it known that I, DAVID J. DORSEY, a citizen of the United States, residing at Baton Rouge, in the parish of East Baton Rouge, State of Louisiana, have invented certain new and useful Improvements in Soot Blowers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in cleaning devices and particularly to devices for removing soot and other accumulations from boiler pipes and flues.

One object of the invention is to provide a device of this character by means of which hardened or baked deposits, which are not subject to the effect of a simple draft of air or steam, may be effectively removed.

Another object is to provide a device of this character wherein steam and a gritty comminuted material are delivered into the boiler flues or pipes, with the result that the caked or hardened material will be ground loose and blown from the flues, with the result that the flues will be restored to their normal efficiency, and the maximum efficiency and economy of fuel preserved.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing.

Figure 1 is a side elevation of a flue cleaner made in accordance with the invention.

Figure 2 is a vertical longitudinal central sectional view through the device.

Referring particularly to the accompanying drawing, 10 represents a blow-pipe adapted for insertion in a boiler tube or flue 11, and is provided with a collar 12 adapted to engage with and close the end of the flue, to prevent back pressure or escape of the soot, said collar being adjustable relative to the blow-pipe by means of the set screws 13. In the upper side of the blow-pipe 10, and intermediate the length thereof, is a sand receiving opening 14, while an air inlet opening 15 is formed in the pipe a short distance rearwardly of the opening 14. Extending longitudinally into the rear end portion of the blow-pipe 10 is a steam or air injector nozzle 16, the tip of which is disposed adjacent the rear edge of the opening 14, and forwardly of the air inlet opening 15, said nozzle having suitable connections 17, with a source of steam or air supply, not shown, and having the check valve 18 provided with the upwardly extending valve stem 19. The casing of the valve carries a bracket 20 on which is pivotally mounted the operating lever 21, said lever being arranged in position to engage with the outer end of the stem 19 to depress the same.

Clamped on the upper side of the pipe 10, and over the opening 14, is a plate 22, said plate having an upwardly extending nipple 23 which communicates with the opening 14. Formed intermediate the length of the nipple 23 is an enlargement 24 horizontally through which is formed the slot 25, and slidable in this slot, transversely of the nipple, is a plate valve 26, having an opening 27 therein adapted to be registered with the passage through the nipple. On the upper end of the nipple 23 there is mounted a sand hopper which discharges its contents into the nipple and into the blow-pipe 10, as will be clearly understood. Pivotally connected to the plate valve 26, and to the lever 21, is a link 28, whereby when the lever is moved to open the steam valve the valve 18 will be moved into open position to permit sand to fall into the pipe 10, directly in front of the nozzle, and be driven along the said pipe, and into the boiler flue, with the result that the incrustation will be effectively loosened and blown from the flue.

The rear end of the steam connection 17 is provided with a suitable handle 29, which is grasped by the operator to hold the device while in operation, and to guide the pipe 10 into and out of the boiler flue.

What is claimed is:

In a soot blower, the combination with the blow pipe having an opening in its upper side, of an arcuate plate disposed on the pipe in covering relation to said opening and having a central opening registering with the pipe opening, a nipple secured around the opening of the plate

and rising therefrom, a horizontal flange on the upper end of the nipple, a second nipple having a flange on its lower end secured to the first-named flange and having the discharge end of a hopper fitted into its upper end, and a slide valve movable between said flanges.

In testimony whereof, I affix my signature, in the presence of two witnesses.

DAVID J. DORSEY.

Witnesses:
LAWRENCE DALIADIE,
MAUDE KELLER.