

F. SHMONSKY.

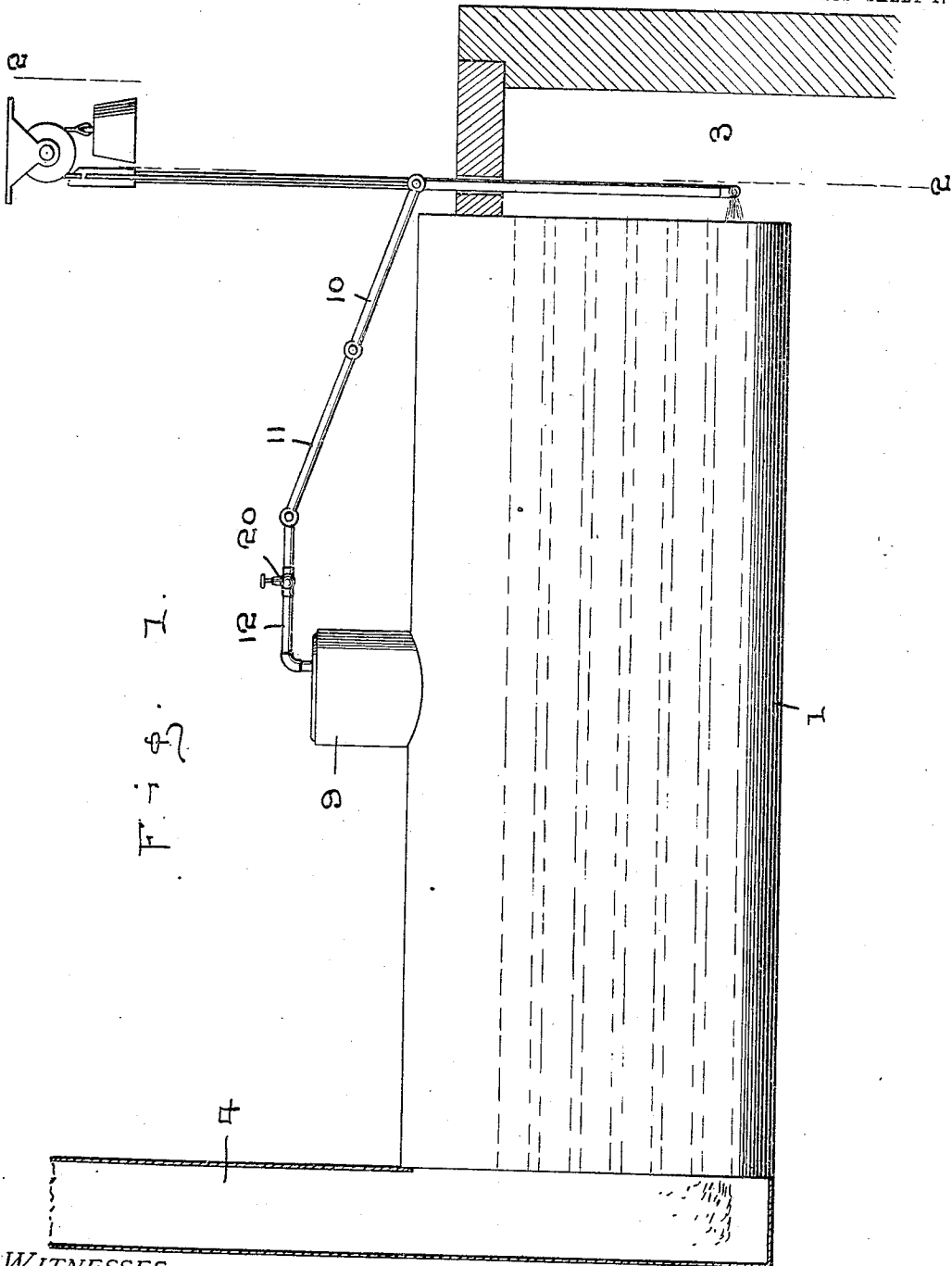
FLUE BLOWER.

APPLICATION FILED JULY 19, 1909.

955,706.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

Thos. W. Shley
J. R. French

INVENTOR
F. Shmonsky

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W. J. Fitzgerald & Co.
Attorneys

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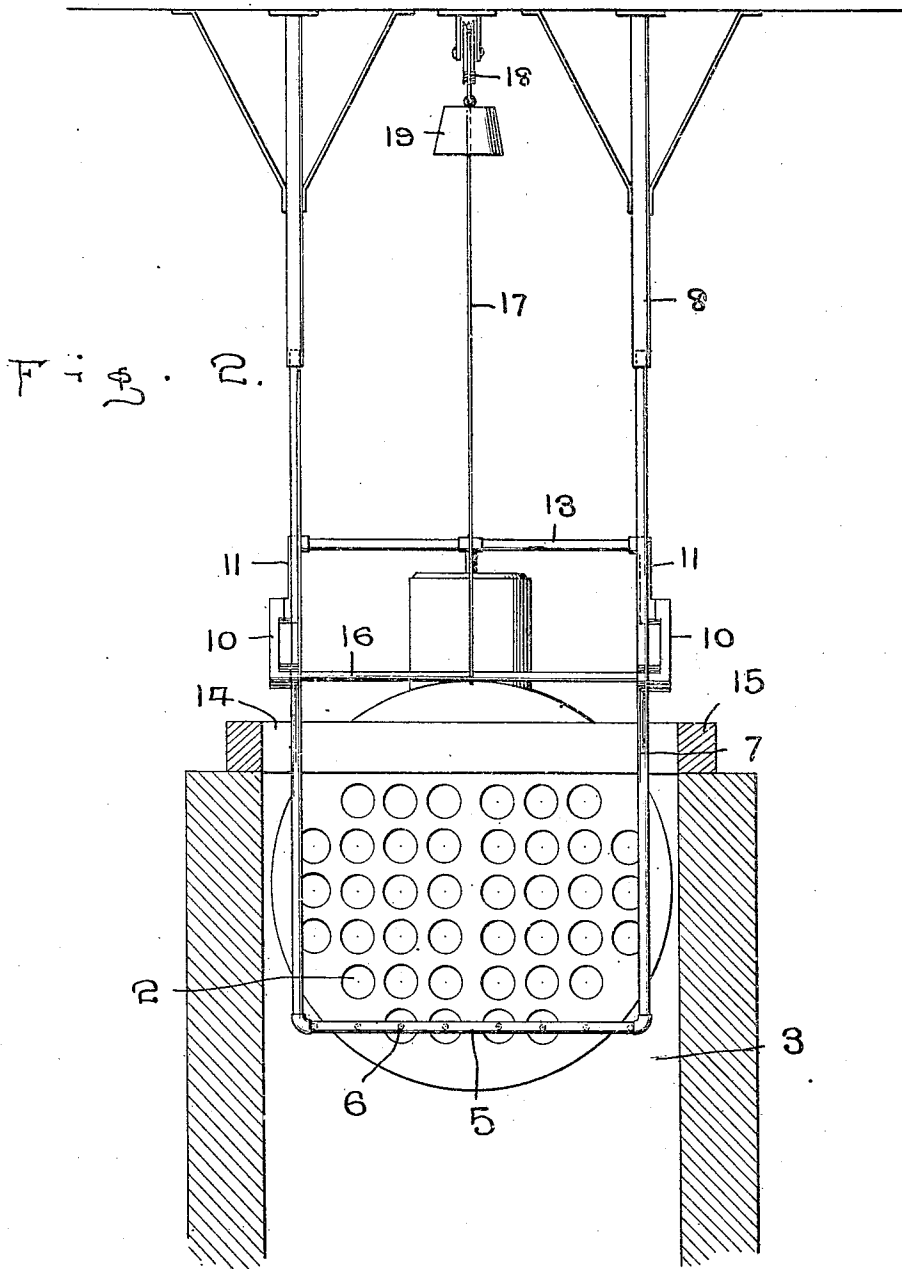
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UNITED STATES PATENT OFFICE.

FRANK SHMONSKY, OF RIDGWAY, PENNSYLVANIA.

FLUE-BLOWER.

955,706.

Specification of Letters Patent.

Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, FRANK SHMONSKY, a citizen of the United States, residing at Ridgway, in the county of Elk and State of Pennsylvania, have invented certain new and useful Improvements in Flue-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.

My invention relates to new and useful improvements in flue cleaners and my object is to provide means for cleaning the flues of the boiler.

A further object is to provide means for adjusting the cleaning devices, whereby jets of steam may be directed through a number of the flues simultaneously and a further object is to provide means for disposing of the cleaning device above the fire chamber of the boiler and a still further object is to provide means for conveying steam into the cleaning device.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claim.

In the accompanying drawings forming part of this application, Figure 1 is an elevation of a boiler partly in section showing my improved cleaning device connected thereto and in its operative position, and, Fig. 2 is a sectional view as seen on line 2—2, Fig. 1.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a boiler, which may be constructed in the usual or any preferred manner and of that class in which the flues 2 preferably extend horizontally, said flues extending through the boiler and arranged in series. In boilers of this class, the products of combustion are preferably conveyed through a chamber 3 to the rear end of the boiler, where said products of combustion enter the flues and pass to the front end of the boiler and are discharged into a chimney or pipe 4, and as the soot, etc., from the products of combustion adhere to the walls of the flues, I have provided my improved cleaning device for thoroughly and speedily removing the obstruction from the flues. To this end, I provide a horizontally disposed nozzle 5, which is of such length as to extend the full

width of the boiler and has upon one of its sides a plurality of ports 6, which are equal in number to the greatest number of flues in any one series and said ports are so arranged as to discharge the contents of the nozzle through the flues as the nozzle is brought into registration therewith.

The nozzle 5 is connected at its ends with vertically disposed pipe sections 7, which sections are in turn entered in guides 8, which are suspended from any suitable point above the boiler, the upper ends of the pipe sections 7 telescoping in said guides when the nozzle 5 is raised and lowered.

The object of this invention is to discharge jets of steam into the flues to force the foreign particles adhering to the walls thereof into the chimney and to accomplish this result, the pipe sections 7 are connected to the dome 9 of the boiler through the medium of hinged pipe sections 10 and 11 and a stationary section 12, the sections 10 and 11 being arranged in pairs and together, the pipe sections 11 being connected to the stationary pipe section through the medium of a cross pipe section 13, in which manner steam is conveyed from the dome through the two-pipe sections 7 and into the opposite ends of the nozzle 5.

The nozzle and lower ends of the pipe sections 7 are extended through a slot 14 in the crown 15 of the chamber 3, which slot is so arranged as to bring the ports in the nozzle in juxtaposition to the ends of the flues and the pipe sections 7 are provided with a cross bar 16, by means of which the nozzle may be raised or lowered and to render this operation less difficult, a cable 17 is attached to the cross bar and extended over a sheave 18 suspended from a bracket above the boiler, the opposite end of the cable having a counterweight 19 attached thereto, which weight is of such dimension as to substantially overcome the weight of the nozzle and parts to which it is attached and serves to hold the nozzle in its adjusted position.

When it is desired to clean the flues, the nozzle is introduced through the slot 14 and moved downwardly until the nozzle is brought into registration with the lowermost series of flues, when the valve 20 is opened and the steam entered into the nozzle through the various pipe sections and in view of the force with which the steam is

discharged from the ports, any foreign particles adhering to the walls of the flues will be removed and blown into the chimney 4.

As soon as one series of flues have been
5 cleaned, the nozzle is brought into registration with the next series of flues and so on until all of the flues have been cleaned, when the nozzle is entirely removed from the slot 14 and suspended over the crown 15, thereby
10 removing the nozzle from direct contact with the products of combustion. In this manner, the flues can be thoroughly and very quickly cleaned and in view of the simplicity of the device, it can be readily and
15 cheaply installed in connection with any boiler and at any time, as the crown is preferably formed of plastic material and can be readily substituted for a brick crown when the cleaning device is established for use in
20 connection with an old boiler. It will likewise be seen that by removing the nozzle from the path of the products of combustion, the parts of the cleaning device will not become injured from heat and thereby
25 rendering the same practically indestructible.

What I claim is:

A device of the character described, comprising a tubular boiler, a chamber receiv-

ing said boiler, a crown-member for said 30 chamber having a slot therethrough in length about equal to the width of said chamber, a nozzle adapted to deliver steam jets into the tube of said boiler, said nozzle 35 having connected thereto upwardly extending lateral pipe-sections, fixed pendent tubular guide members, said upwardly extending lateral pipe-sections having connected to their upper ends pipe extensions received by said tubular guide members, a valved 40 stationary pipe section connected to a source of steam supply, a transverse pipe-section connected to said valved stationary transverse pipe-section and said vertical lateral 45 pipe-sections, a rod connection between said vertical lateral pipe-sections, a counterbalance, means for effecting connection between said counterbalance and said rod connection, said means of connection between said counterbalance and said rod connection engaging 50 an elevated rotary bearing.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK SHMONSKY.

Witnesses:

L. J. A. LESSER,
AGNES MULLEN.