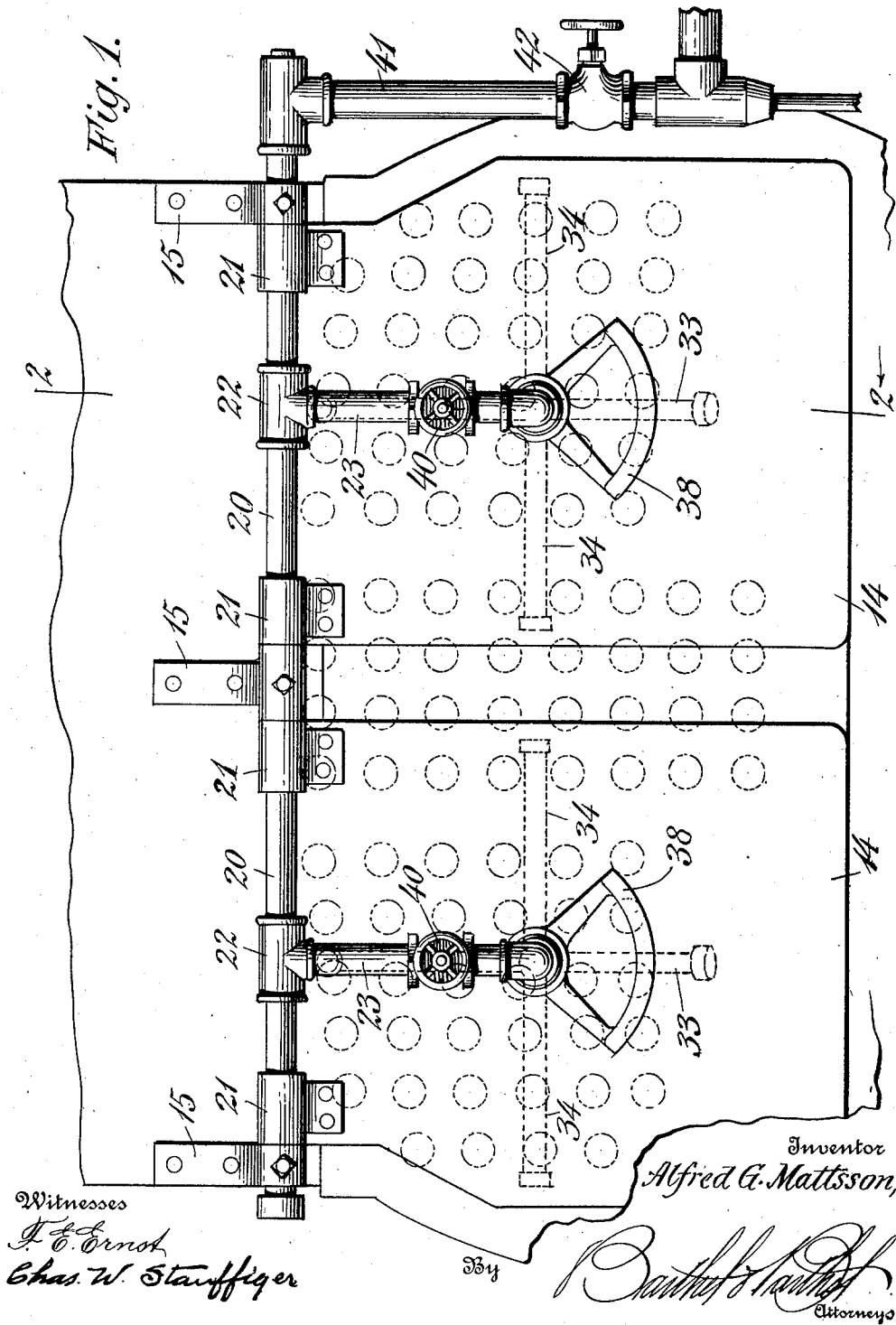


Patented Sept. 12, 1911.
2 SHEETS—SHEET 1.

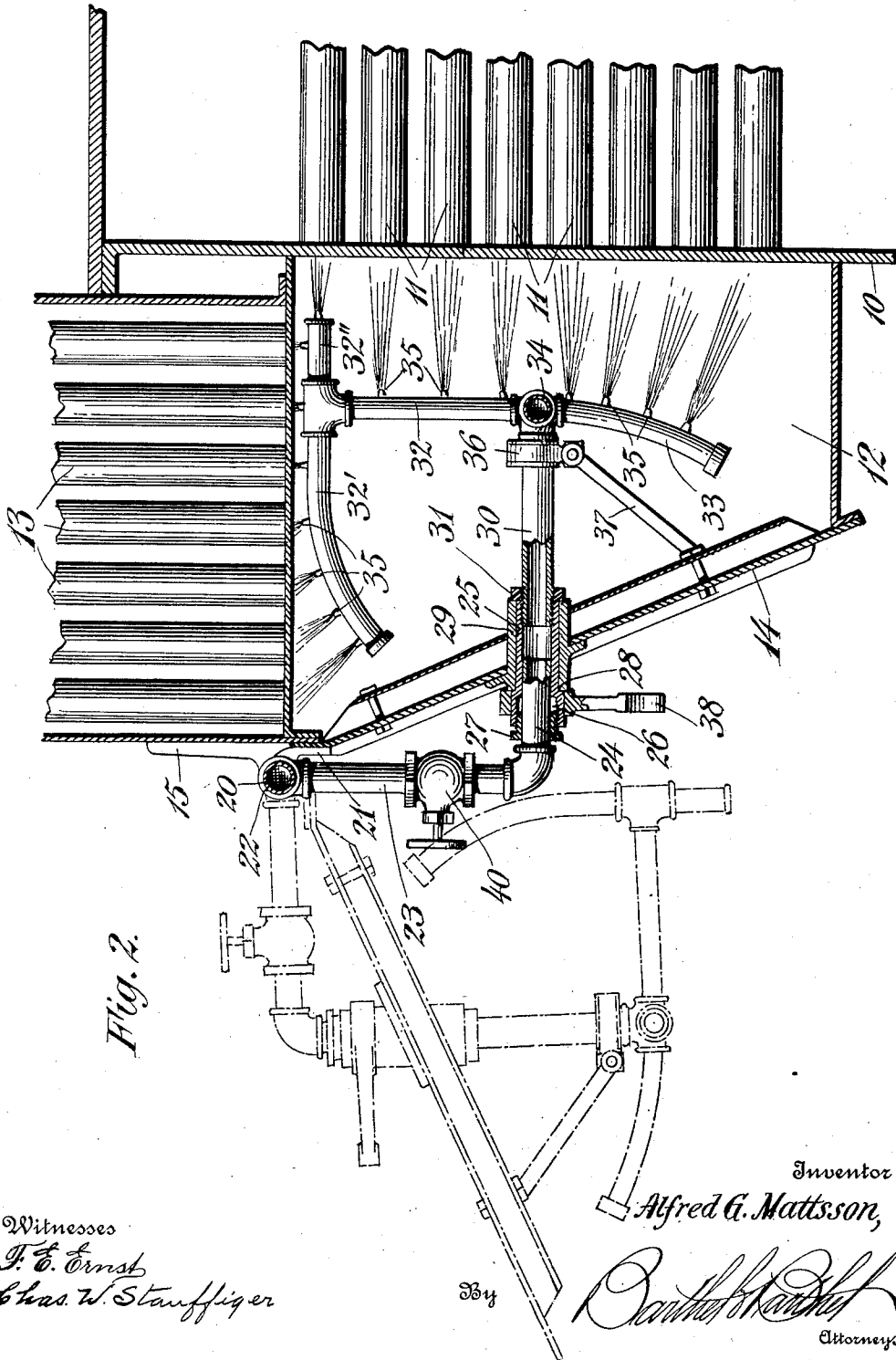


A. G. MATTSSON.
 BLOWER FOR BOILERS.
 APPLICATION FILED JAN. 9, 1911.

1,003,005.

Patented Sept. 12, 1911.

2 SHEETS-SHEET 2.



UNITED STATES PATENT OFFICE.

ALFRED G. MATSSON, OF DETROIT, MICHIGAN, ASSIGNOR TO DIAMOND POWER
SPECIALTY CO., OF DETROIT, MICHIGAN, A COPARTNERSHIP.

BLOWER FOR BOILERS.

1,003,005.

Specification of Letters Patent.

Patented Sept. 12, 1911.

Application filed January 9, 1911. Serial No. 601,756.

To all whom it may concern:

Be it known that I, ALFRED G. MATSSON, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Blowers for Boilers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to blowers for cleaning the tubes of boilers, and more particularly those adapted to be used in connection with marine boilers, and it has for one of its objects the provision of a blowing attachment which may be readily secured to the door whereby the breech of the boiler is normally closed.

The invention, has furthermore for its object the provision of means disposed exteriorly of the breech and also carried on the door, for rotating the attachment to bring the several jets thereof into position to clean the several tubes in successive series or individually.

Further objects of the invention will hereinafter appear and be defined in the claims.

The invention is clearly illustrated in the accompanying drawings, in which similar characters denote similar parts, and in which—

Figure 1 is a fractional front view of a boiler shell having my invention in place on the breech-door thereof, and Fig. 2 is a section thereof, on line 2—2 of Fig. 1.

Referring to the drawings, 10 denotes the main shell of a marine-boiler, having horizontal flues 11 which open at their front ends into the "breech-chamber" 12, through which the products of combustion pass before entering the vertical flues 13. The breech 12 is provided with one or more doors 14 pivotally supported for vertical swinging movement on brackets 15 secured to the front wall 16 of the shell. The blower attachment forming the subject matter of my present application, is directly held on the door 14, so that when the latter is swung open to remove soot, cinders, etc., from the breech, the entire blowing device will be simultaneously swung out of the way to permit access to the open ends of the flues. On the other hand, when the door is closed, the blower attachment is in proper position for operation.

In its preferred form, the blower com-

prises a steam-supply pipe 20 extending horizontally across the front of the boiler and supported in the brackets 15 above mentioned. Hinge-plates 21 serve as hangers for the door 14, and a T-union 22 permits steam to pass from the supply pipe 20 into a leader 23 having a horizontal thimble 24.

Mounted for rotation on the thimble 24, is a tubular shell 25 which is chambered at its front-end to form a stuffing-box 26 for the reception of a gland 27, thus establishing a steam-tight rotary joint between said thimble and shell. The latter is exteriorly shouldered, at 28, to rest against the front face of a tubular bracket 29 rigidly secured to the door 14 and constituting a bearing in which the sleeve is journaled, while the rear end of said sleeve is in tight engagement with a pipe 30 having a collar 31 whereby the sleeve and inner pipe will be held against longitudinal movement in the bracket 29. The other end of the pipe 30 has radial branch pipes 32, 33, 34, the branch 32 having sub-branches 32', 32'', the latter being curved as shown to bring the end of the branch nearer its axis of revolution (pipe 30), and thus permit greater angular side-swing, than it would have, when straight and its consequent early interference with the inclined inner face of the door 14. The lower end of the branch 33 is also drawn back to permit its passing through the door-opening when the door 14 is swung open.

The branch-pipes and sub-branches carry nipples 35 positioned to direct jets of steam into the flues 11 and 13; and, in order to adapt the blower to the many different tubes without choking the chamber 12 with a complex and cumbersome apparatus, the present device is mounted for partial rotation around the axis of the sleeve 25, the pipe 30 being rotatably supported near its inner end by a bearing 36 attached to a brace 37 of the door. Oscillatory motion may be imparted to the blower by an arm 38 secured to the outer end of the sleeve 25 (see Fig. 2).

In Fig. 1 of the drawings the boiler-front is shown comprising a pair of doors 14, each of which carries a blower as above described, and in order to make each blower operable independently of the other, each leader 23 has a valve 40 whereby the passage of steam from the pipe 20 may be controlled. In this instance the supply pipe 20 has at

one end a vertical feeder 41 provided with a valve 42 whereby the steam-supply into the pipe 20 may be controlled, the latter being stationary in the brackets 15, while the door-hinges 21 and unions 22 may rotate on the pipe 20.

It should be distinctly understood that the particular organization and construction above described, may be varied in many ways without departing from the spirit of the invention.

I claim:—

1. The combination with the breech-door of a boiler, of a blower comprising a pipe extending through said door and having jet-openings, and means for rotatively supporting said pipe in said door.

2. The combination with a boiler, and a breech-door therefor and hinged thereto, of a steam pressure pipe passing through the pivot members of said hinge, a leader con-

nected with the pressure-pipe and terminating at the inner side of said door, means for securing said pipe to said door, and jet-members on said pipe.

3. The combination with a boiler, a breech-door therefor, and a hinge-connection between said door and boiler and comprising a tubular hinge-post, of a blower comprising a pipe having jet-openings, and pivotally extending through said door, a leader connecting the outer end of said pipe with the interior of the hinge post, and a pressure supply connected with said hinge-post.

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

ALFRED G. MATTSSON.

Witnesses:

OTTO F. BARTHEL,
ANNA C. RAVILER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."