

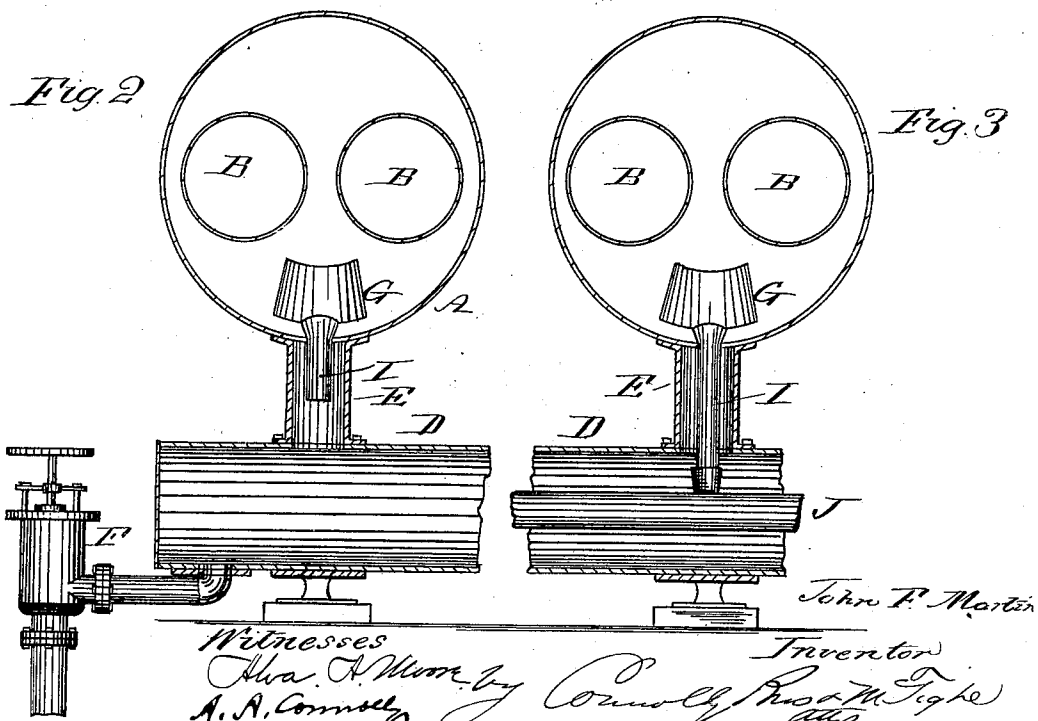
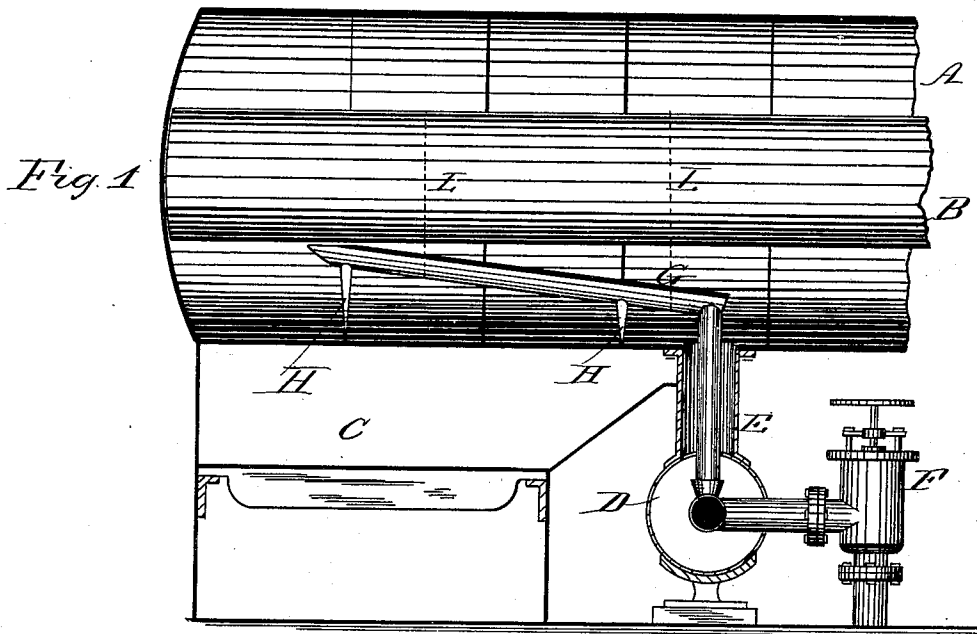
(No Model.)

J. F. MARTIN.

SCALE COLLECTOR FOR STEAM BOILERS.

No. 323,703.

Patented Aug. 4, 1885.



UNITED STATES PATENT OFFICE.

JOHN F. MARTIN, OF ALLEGHENY CITY, PENNSYLVANIA.

SCALE-COLLECTOR FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 323,703, dated August 4, 1885.

Application filed June 1, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MARTIN, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Scale-Collectors for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to scale-collectors for steam-boilers, and has for its object the provision of means whereby the scale and sediment which may collect in the boiler and usually deposits upon the bottom thereof may be prevented from adhering to the boiler, and will be carried off and deposited in the mud-drum or other suitable receptacle.

The invention consists in the novel construction, combination, and arrangement of parts, as hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of a boiler with my improvement in position therein; Fig. 2, a vertical transverse sectional view of the same, and Fig. 3 a sectional view of a boiler having a modified form of my improvement therein.

A designates the shell of the boiler, which is of the usual or any desired form, and need not therefore be particularly described.

B designates the smoke-flue running through said boiler, and C the fire-box.

D designates the mud-drum placed below the bottom of the boiler A, and connected thereto by one or more flues or tubes, E, in the usual manner.

F designates the steam-valve and connections through the medium of which the contents of the mud-drum D are discharged when desired.

G designates a semicircular pan, which is placed within the boiler A and supported a short distance above the bottom of the same upon legs H H. This pan G serves to collect the scale and direct it into the mud-

drum, and for the purpose of preventing the scale from collecting in large quantity in the pan, when it would inevitably flow over the sides thereof and settle upon the bottom of the boiler, I arrange the said pan at an angle to the bottom of the boiler sloping downwardly toward the mud-drum, and affix to its lower end a pipe, I, which dips down some distance into the mud-drum D and opens into a flue or tube, J, arranged within the mud-drum D, and connected with the valve mechanism F in such manner that the scale may be blown out of the said tube when deemed necessary.

In the modification, Fig. 2, the tube J is dispensed with, and the tube I opens directly into the mud-drum and deposits the scale upon the bottom thereof, from whence it is blown off with the mud and other sediment.

The pan G should be so formed as to be concentric with the shell of the boiler, so as not to interfere with the free circulation of the water; and instead of the legs H H the pan may be supported in any other suitable manner—as, for instance, by means of chains or rods L L, attached to the pan and to the smoke-flue B.

I am aware that it is not new, broadly, to arrange a pan for the collection of scale within a boiler and to provide said pan with a tube leading into the mud-drum; but heretofore the pan has been so arranged as to be parallel with the bottom of the boiler.

Should more than one boiler be in use having communication with a single mud-drum, the several pans may communicate with a single tube, J, or separate tubes may be provided for each pan.

Having described my invention, I claim—

1. In combination with a boiler, a scale pan or collector arranged in said boiler at an angle to its bottom and communicating with a mud-drum or other suitable receptacle for scale and sediment, substantially as described.

2. The combination, with boiler A, and mud-drum D, of inclined pan G, tube I, connected to said pan, and tube J, arranged in

the mud-drum and connected to the tube I, all constructed and arranged substantially as described.

5 3. In combination with the boiler A and mud-drum D, the pan or chute inclined from its forward end downwardly toward said mud-drum and communicating therewith through the tube I, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN F. MARTIN.

Witnesses:

JNO. F. ATCHESON,
THOS. A. CONNOLLY.