

W. YOUNGBLOOD & T. J. HOLMES.
Boiler-Scale Collector.

No. 227,605.

Patented May 11, 1880.

Fig: 1.

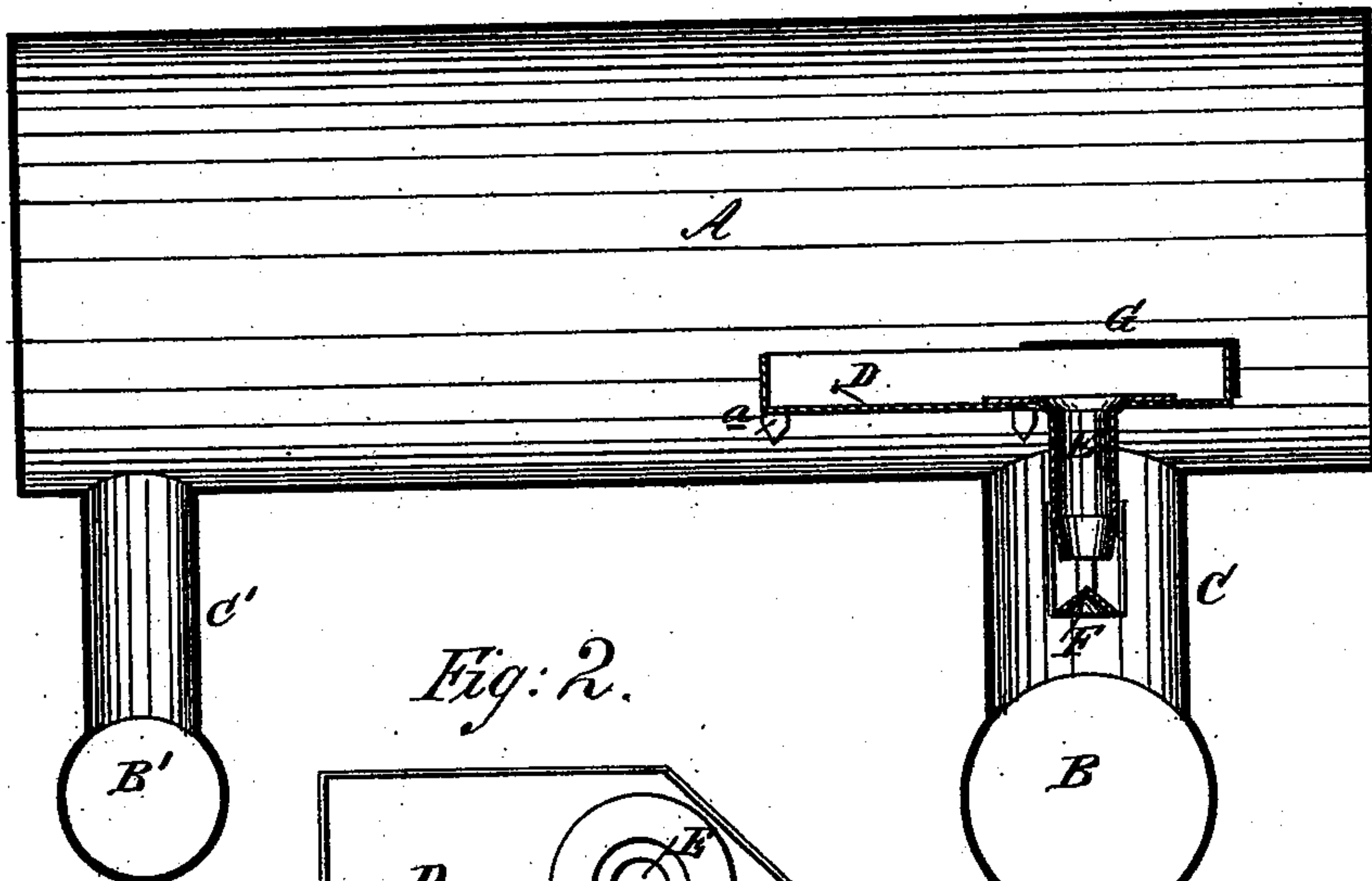


Fig: 2.

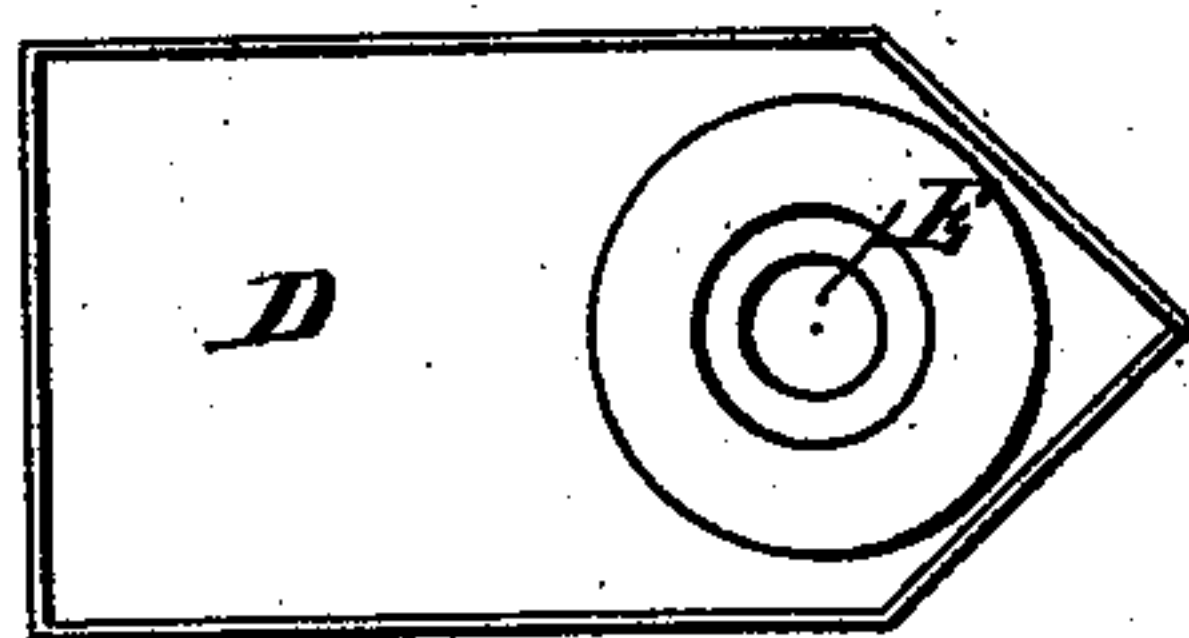
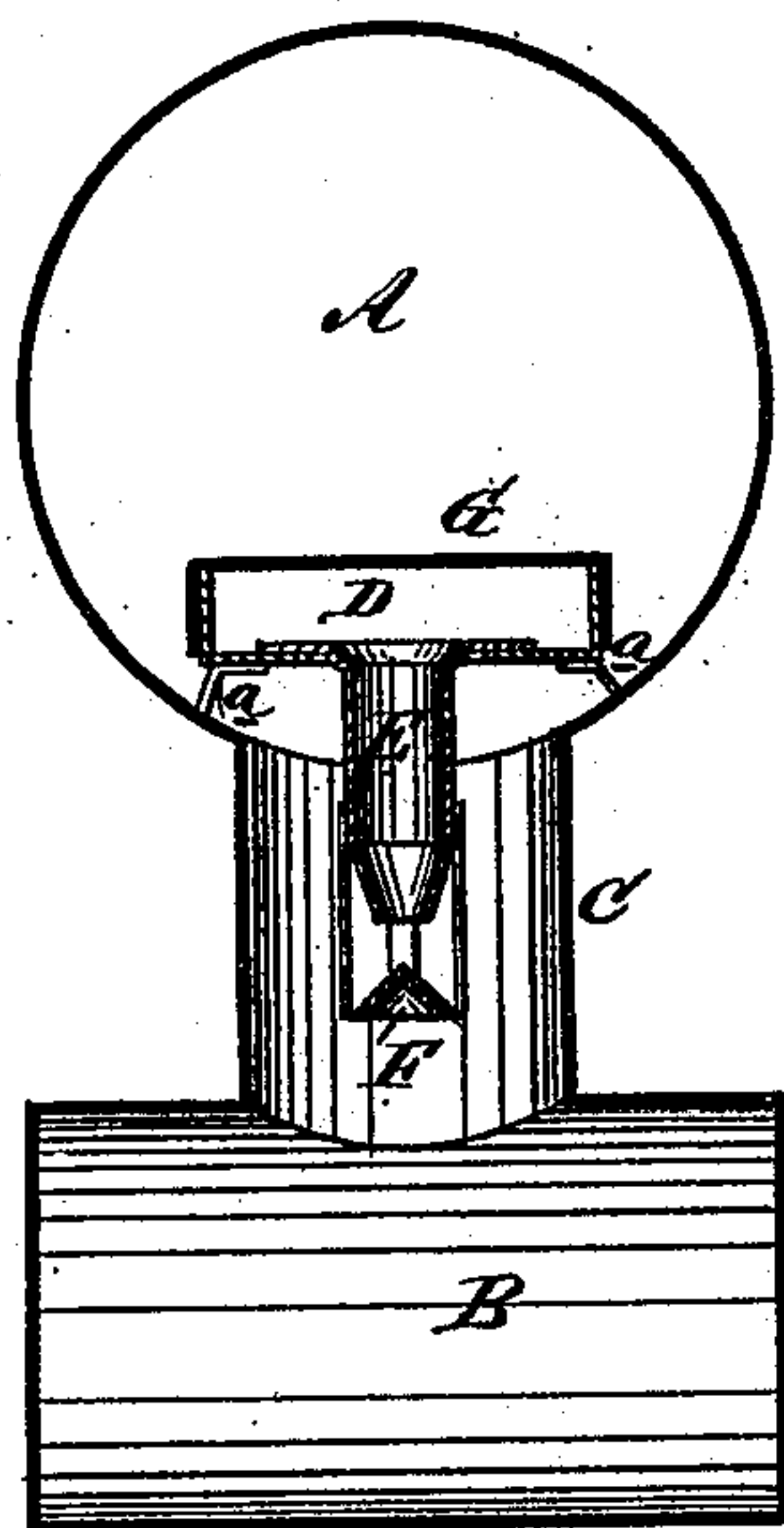


Fig: 3.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILSON YOUNGBLOOD AND THOMAS J. HOLMES, OF NEW ORLEANS, LA.

BOILER-SCALE COLLECTOR.

SPECIFICATION forming part of Letters Patent No. 227,605, dated May 11, 1880.

Application filed February 4, 1880.

To all whom it may concern :

Be it known that we, WILSON YOUNGBLOOD and THOMAS J. HOLMES, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Boiler-Scale Collector, of which the following is a specification.

Figure 1 is a sectional side elevation of a boiler, showing the scale-collector in position. Fig. 2 is a plan of the collector. Fig. 3 is an end elevation of the boiler, partly in section, showing the scale-collector in position.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a simple device for preventing the collection of scale on the crown-sheet of a boiler.

In many muddy rivers, where the river water is used in steamboat-boilers, a great deal of sediment or scale quickly adheres to the crown-sheet of the boiler and causes by its presence an unequal heating and consequent distortion, bulging, and frequent fracture of the crown-sheet.

Our invention is designed to protect the crown-sheet of the boiler by preventing this deposit or scale.

In the drawings, A represents the boiler, provided with mud-drums B B', attached to the boiler by their legs C C'. D is the scale-collector, which may be a metal pan from three to six feet long, or thereabout, from twelve to eighteen inches wide, and from two to four inches deep, and provided with feet *a a*, to hold it a few inches above the crown-sheet of the boiler. It is also provided with a tube or discharge-pipe, E, which passes down through the crown-sheet of the boiler into the leg C of the mud-drum B, whereby the mud and scale deposited in this collector are conducted into

the said mud-drum B. On the end of this discharge-pipe E is a cap, F, whose object is to prevent the mud and scale from returning to the scale-collector.

Ordinarily the scale-collector D is uncovered; but sometimes, when used in a boiler where there is a violent circulation of water, it may be partially covered by a cover, G, which serves to prevent undue agitation of the water in the scale-collector D, and thereby facilitates the deposit of the mud in it.

When the scale-collector D is placed in the position shown in the drawings and the boiler is in operation, it is found that a violent circulation of water is caused on the crown-sheet beneath the said collector, so that all deposit and scale upon the crown-sheet is thereby prevented, and it is also found that the point of least circulation in the boiler is immediately above and within the scale-collector D. Consequently the mud tends to deposit within this collector D, and to gravitate thence into the mud-drum B of the boiler.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

A boiler-scale collector consisting of the pan D G, arranged immediately over the grate-bars on the bottom of boiler, said pan being partly covered and provided with discharge-pipe to prevent the deposit of scales on the boiler-sheet and carry them into the mud-drum, all constructed and arranged for operation as specified.

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Witnesses:

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