

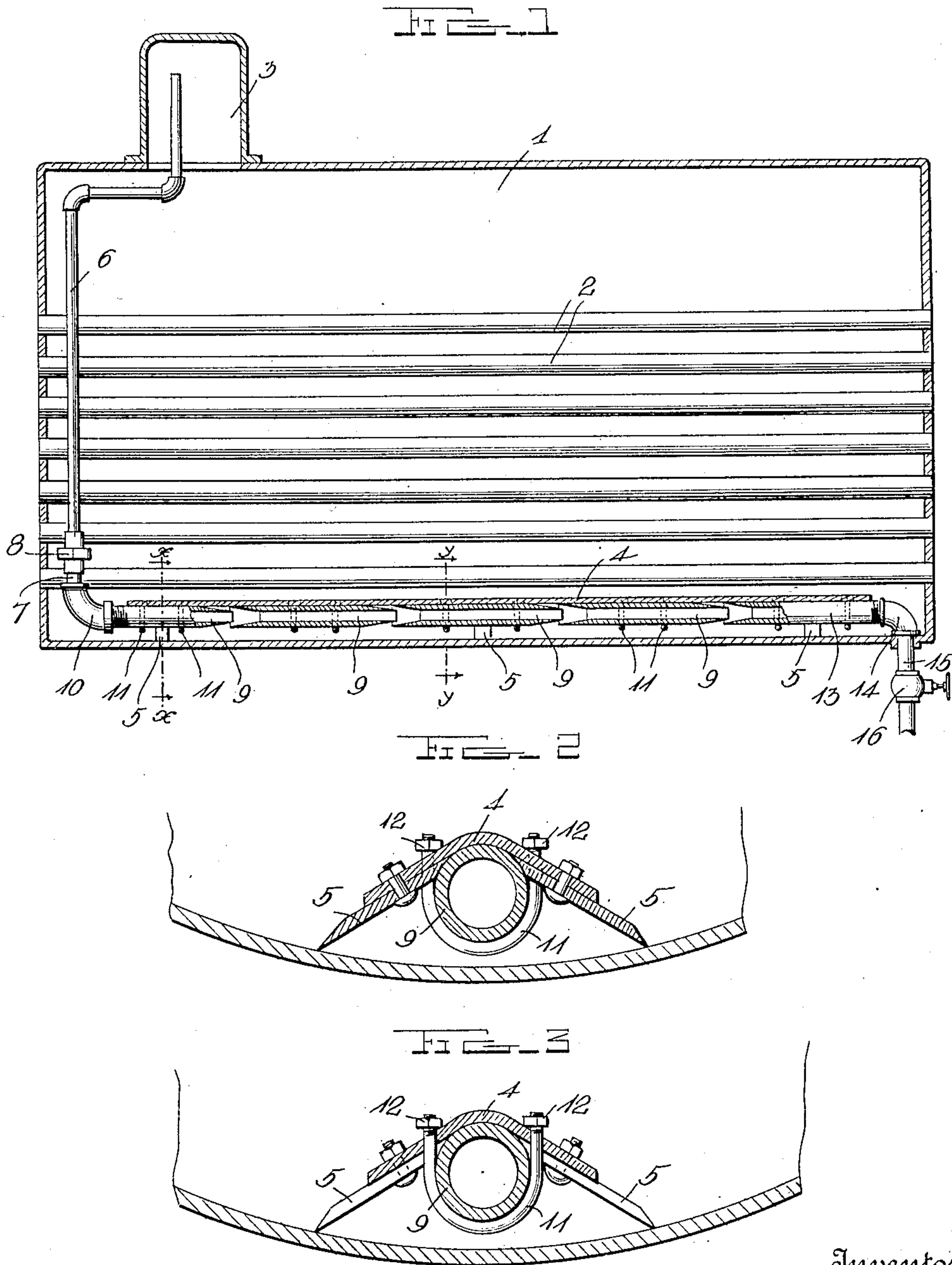
W. D. NICHOLSON & W. H. SMITH.

BOILER CLEANER.

APPLICATION FILED MAR. 9, 1908.

906,652.

Patented Dec. 15, 1908.



Witnesses

C. H. Giesbauer

C. H. Giesbauer

Inventors

W. D. Nicholson

W. H. Smith

By *A. B. Wilson & Co*

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM D. NICHOLSON AND WILLIAM H. SMITH, OF CLYMERS, INDIANA.

BOILER-CLEANER.

No. 906,652.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed March 9, 1908. Serial No. 420,017.

To all whom it may concern:

Be it known that we, WILLIAM D. NICHOLSON and WILLIAM H. SMITH, citizens of the United States, residing at Clymers, in the county of Cass and State of Indiana, have invented certain new and useful Improvements in Boiler-Cleaners; and we do declare the following to be 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.

Our invention relates to boiler cleaners, and the object of the invention is to provide a device of this character which may have one end thereof attached to the steam dome or other part of the boiler where it may be in communication with the steam, and the other end attached to the blow-off opening so as to effectually blow out or form a suction which will draw into the blow-off device all the scale and mud in the boiler.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be described and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the device; Fig. 2 is a transverse sectional view on the line $x-x$ of Fig. 1; and Fig. 3 is a transverse sectional view on the line $y-y$ of Fig. 1.

Referring more especially to the drawings, 1 represents a boiler, 2 the flue tubes mounted therein, and 3 the steam dome. Below the tube in the bottom of the boiler the shield, 4, is supported by outstanding legs, 5, bolted to the shield and extending out from either side thereof to engage the bottom of the boiler.

6 represents the live steam pipe which is connected in any suitable manner to the steam dome 3, or other suitable source, and has connected to it the lead, 7, by a suitable coupling, 8, which joins the parts together. This lead extends to the bottom of the boiler where it is joined with one of a series of discharge nozzles, 9, by an elbow, 10, of the usual construction. Each nozzle is provided at one end with a reduced or beveled edge so as to fit within the reamed-out opposite end of the nozzle, and each nozzle is secured by two U-shaped clips, 11, which pass through

the shield, 4, and are secured by nuts, 12, threaded upon their outer ends. The first nozzle, 5, is threaded into the elbow, 10, and has a beveled front end. The last nozzle projects into the reamed-out end of a sleeve, 13, of the same diameter as the nozzles. This sleeve is mounted upon the shield in a manner similar to the nozzle 5, and is connected to an elbow, 14, which couples the sleeve with a connecting pipe, 15, communicating with the discharge or blow-off opening. This pipe, 15, is provided with a valve, 16, controllable to prevent the operation of the device, except when needed.

From the foregoing description, taken in connection with the accompanying drawing, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

Having thus described our invention, what we claim as new and desire to secure by Letters-Patent, is:

In a device of the class described, the combination with a boiler, of a steam supply pipe connected to the source of steam supply therefrom, a discharge nozzle connected to the blow-out hole of the boiler, a plurality of disconnected nozzles arranged in alinement between the supply pipe and the discharge pipe, an inverted V-shaped shield covering said nozzles and separated therefrom, clamping devices carried by said shield for supporting said nozzles in alinement, and a plurality of legs secured on the under side of the shield for raising the shield and supporting the device within the boiler said legs having their inner ends engaged with the nozzles so as to be held in position thereby.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM D. NICHOLSON.
WILLIAM H. SMITH.

Witnesses:

BENJAMIN F. LONG,
GEO. W. WALTERS.