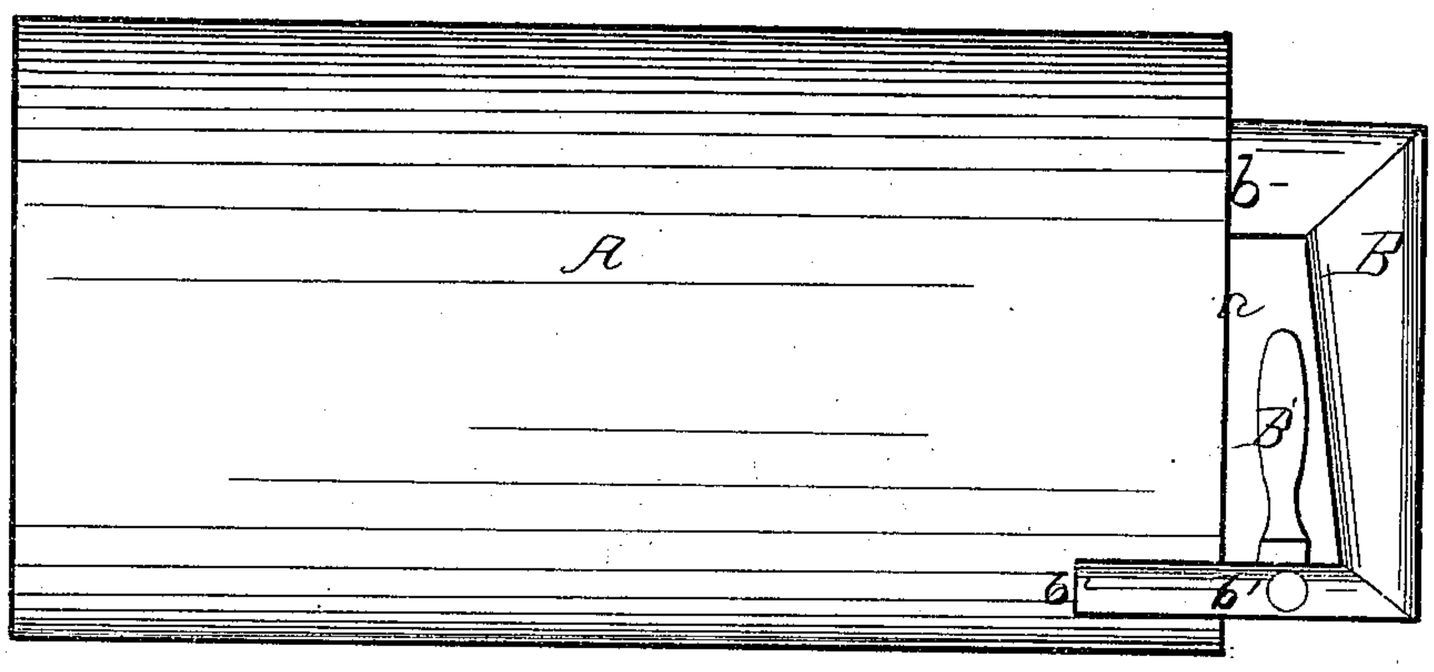
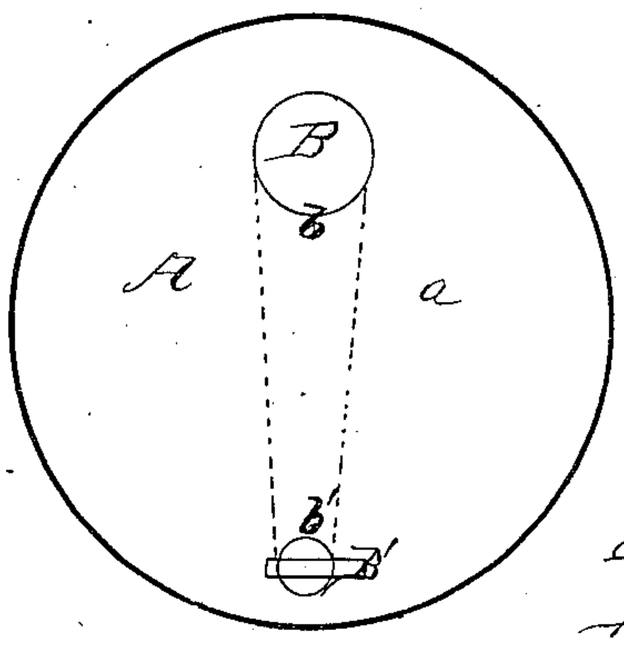
G. W. Wisrell,

Steam-Boiler Cleaner.

No. 71,109. Patented Nov. 19, 1867.





Witnesses.
S. E. White
H. Pauly

Inventor.
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United States Patent Office.

GREG W. WISWELL, OF PILOT KNOB, MISSOURI.

Letters Patent No. 71,109, *dated November* 19, 1867.

IMPROVEMENT IN BOILER-CLEANERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GREG W. WISWELL, of Pilot Knob, in the county of Iron, and State of Missouri, have invented a new and useful device for Cleaning Steam Boilers; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a device for producing a current along the bottom of a steam boiler, so as to wash the sediment up to one end thereof, from whence it may be easily removed at pleasure through the man-hole. The device consists of a tapering funnel-shaped pipe, the large end of which is to be attached to the boiler-head just below the water line, and the small end to the same head close to the bottom of the boiler. By this arrangement a current is produced and maintained which drives the sediment along the bottom of the boiler to near the back man-hole, from whence it may easily be removed.

To enable those skilled in the art to make and use my improved device for cleaning boilers, I will proceed to describe its construction and operation.

The drawings represent sectional elevations of the apparatus applied to a boiler.

The boiler A may be of any of the usual forms, as, for instance, flue, tubular, or locomotive, and the tapering pipe B, which forms the chief feature of this invention, will have both of its ends attached to the head-plate a, which will be perforated at b and b^1 the proper size for the reception of the said attachments. The orifice at b will be, say, twice or three times the size of the orifice at b^1, (more or less,) and the pipe B, between the two points of attachment, will diminish regularly between the two points, and the lower end b^2 will extend a short distance inside the boiler and be somewhat flattened, so as to expand the current discharged therefrom into a stream of sufficient width to sweep the entire bottom of the boiler. As the area of the pipe at b is very much larger than at b^1, a strong current will be generated therein from the top downwards; owing principally to the difference of area exposed to the pressure, and partly, perhaps, by the cooling process that prevails in the pipe, thus compelling the cooler water to descend and find its exit in a rapid current at b^2. A stop-cock, B′, may be placed in the pipe B to control the action of the cleaner or washer.

Having described my invention, what I claim, is—

The construction and arrangement of the pipe B, with reference to its tapering dimensions, and its flattened end b^2, when applied to the boiler A, as described and shown.

GREG W. WISWELL.

Witnesses:

W. C. DOUTHETT,

W. W. GRUN