

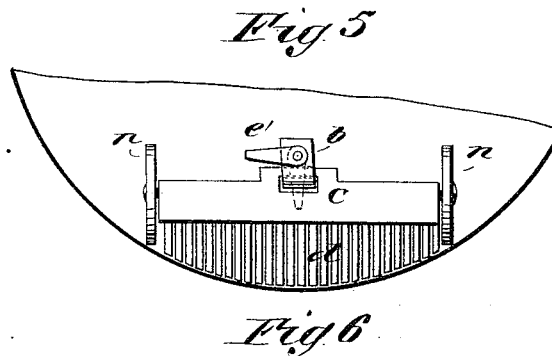
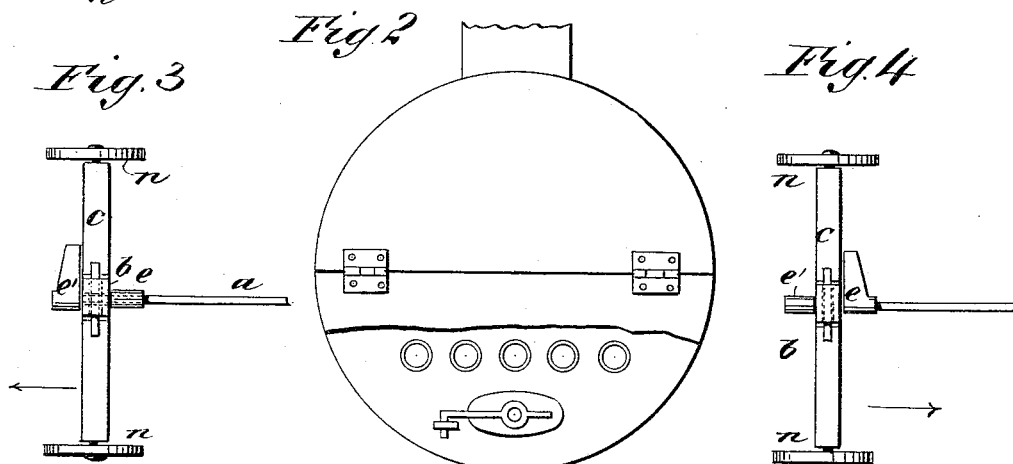
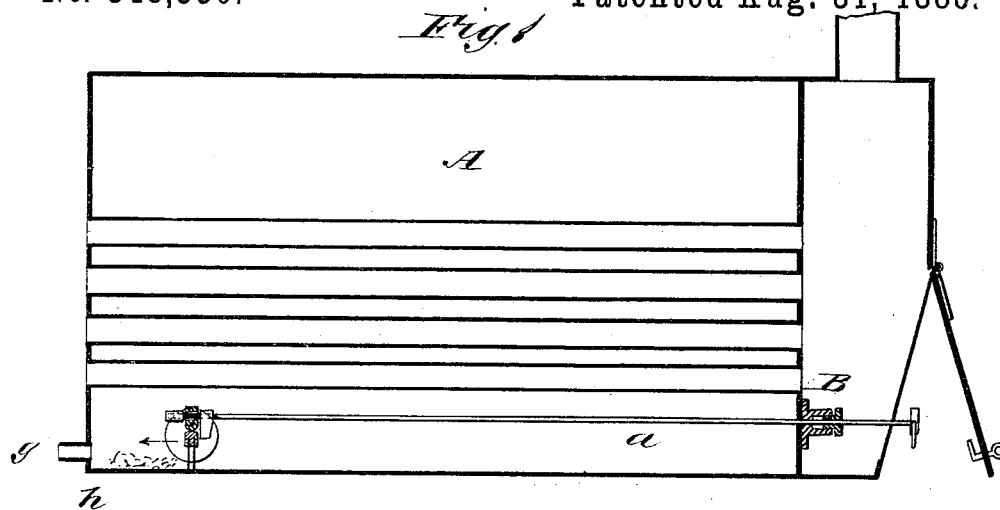
(No Model.)

J. MILLAR & G. FEENY.

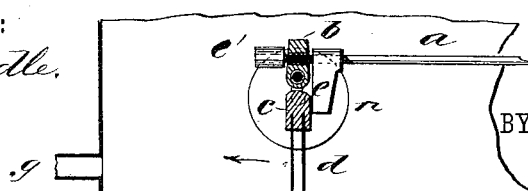
BOILER CLEANER.

No. 348,530.

Patented Aug. 31, 1886.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES MILLAR AND GEORGE FEENY, OF AMABEL, ONTARIO, CANADA.

BOILER-CLEANER.

SPECIFICATION forming part of Letters Patent No. 348,530, dated August 31, 1886.

Application filed November 11, 1885. Serial No. 182,449. (No model.)

To all whom it may concern:

Be it known that we, JAMES MILLAR and GEORGE FEENY, subjects of the Queen of Great Britain, residing at Amabel, in the county of Bruce, Province of Ontario, Dominion of Canada, have invented a new and Improved Boiler-Cleaner, of which the following is a full, clear, and exact description.

Our invention relates more particularly to a permanent attachment to the boiler, although the device is applicable to certain forms of boiler which were not originally made with reference to the use of such an instrument as we are about to describe.

The invention consists of a brush formed from steel wire mounted in a head that is hinged to a block fixed on one end of a manipulating bar or rod. This rod passes loosely through the block, and upon either side carries two arms or lugs, which project at right angles from the rod.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal vertical sectional view of a boiler provided with our improved form of cleaner. Fig. 2 is a view of the rear of the boiler, a portion of the casing being removed to disclose the construction of the boiler proper. Fig. 3 is a plan view of the cleaner, the parts being shown in the position they occupy when the cleaner is to be held in vertical position when being pushed from the operator. Fig. 4 is a similar view, the parts being represented in the position they assume when the cleaner is to be held in vertical position and drawn toward the operator. Fig. 5 is a view of the front of the cleaner, and Fig. 6 is a cross-sectional elevation of the cleaner.

Referring now to the general construction illustrated in the drawings, A is a boiler of the horizontal type, provided with a packing-box, B, located at the front or rear of the boiler, as required, and near its lower side. A long steel or iron rod, *a*, is fitted tightly within the packing-box B, and projects inward toward the opposite end of the boiler, and on the end of this rod there is loosely mounted a block, *b*, to which block there is hinged a

brush-head, *c*, to which the wire splints *d* are attached. Upon either end of the head *c* there is a journal carrying a small wheel, *n*, arranged to run upon the bottom of the boiler and support the brush-head in a horizontal position at about right angles to the rod *a*. Upon either side of the block *b*, and rigidly secured to the rod *a*, are lugs or arms *e e'*, arranged at right angles the one to the other, so that when the lug *e* is turned down to a vertical position the lug *e'* will be in a horizontal plane, the lug *e* being for the purpose of driving the brush along the bottom of the boiler toward the blow-off *g*, while the lug *e'* is for the purpose of pulling the brush toward the front of the boiler.

If the brush is to be pulled toward the front of the boiler without carrying the accumulated dirt or mud with it, the lug *e'* is turned up, and then, when the rod *a* is drawn outward, the brush will be free to swing backward and be dragged along the bottom of the boiler.

Although we have described the blow-off as located at the rear end of the boiler, it will of course be understood that in certain circumstances such blow-off might be located at any point in the bottom of the boiler, or at its forward end. If, for instance, the blow-off were in the middle of the bottom of the boiler, the brush would be used to push the mud from the forward end back toward the center, in which case the lug *e* would be turned down, but would be elevated the moment the brush passed the blow-off, and so held while the brush was being pushed farther toward the rear, and when the brush was started on its forward movement the lug *e'* would be turned down and the brush held in rigid vertical position when being drawn forward toward the center.

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

1. A boiler-cleaner consisting, essentially, of a rod, *a*, carrying fixed lugs *e e'*, a block, *b*, and a head-block, *c*, carrying splints or wires, substantially as described, and for the purpose specified.

2. The combination, with a boiler, of a cleaner consisting, essentially, of a brush hinged

to a block loosely mounted on a rod between two fixed lugs, substantially as and for the purpose specified.

3. The combination, with a boiler, of a brush
5 hinged on a block loosely mounted on a rod between two lugs that are fixed to a rod at right angles the one to the other, such rod passing through a packing-box, and the head-

block of the brush being provided with small wheels, as *n*, substantially as described, and 10 for the purpose specified.

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