

J. R. MARTIN.
 BOILER CHECK VALVE CLEAN-OUT.
 APPLICATION FILED MAR. 17, 1909.

948,702.

Patented Feb. 8, 1910.

Fig. 1.

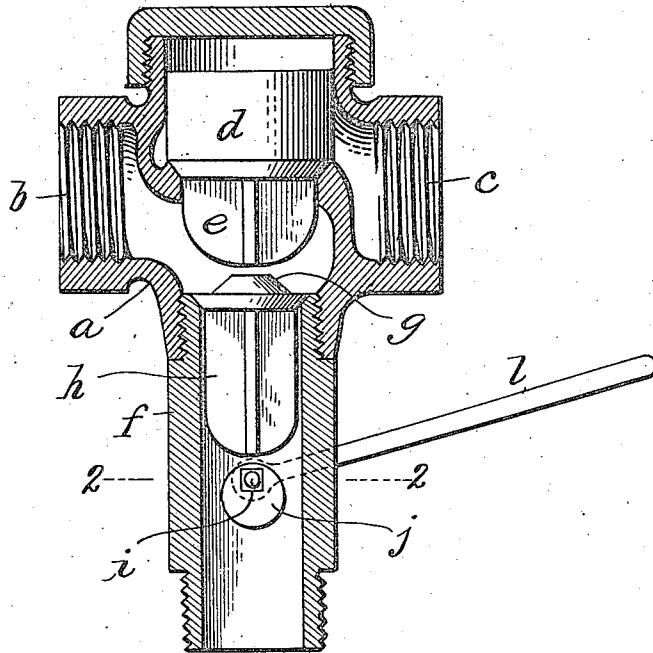
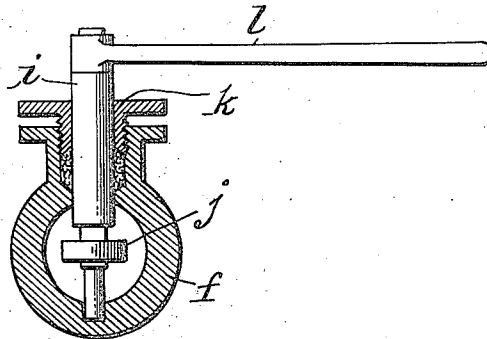


Fig. 2.



Witnesses

Edwin L. Yewell
 R. H. Bridges

Inventor,

John R. Martin,
 Davis & Davis,

Attorneys.

UNITED STATES PATENT OFFICE.

JOHN R. MARTIN, OF CLARKSVILLE, TENNESSEE.

BOILER-CHECK-VALVE CLEAN-OUT.

948,702.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed March 17, 1909. Serial No. 484,015.

To all whom it may concern:

Be it known that I, JOHN R. MARTIN, a citizen of the United States of America, and a resident of Clarksville, county of Montgomery, State of Tennessee, have invented certain new and useful Improvements in Boiler - Check - Valve Clean - Outs, of which the following is a full and clear specification, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of the check-valve provided with my improvements; and, Fig. 2 is a horizontal section on the line 2—2 of Fig. 1.

In locomotives it is universally the practice to place a check-valve in the feed-water passage leading from the injector to the boiler, to check the back flow of the water that is fed into the boiler. It frequently happens that foreign matter will get in between the valve and its seat and thus interfere with its proper opening and closing. The common practice now when the valve gets out of order in that way is to draw the fire from the engine and dismantle the valve-casing and clean out the valve by hand. This involves a serious delay and loss of use of the locomotive and it is the object of my invention to apply a check-valve attachment whereby the valve-seat may be cleaned out without either drawing the fire or dismantling the valve-casing, as more fully hereinafter set forth. I have heretofore patented one form of an apparatus for overcoming this objection, my patent being numbered 913,023, and dated February 23, 1909, and the present improvements are designed to adapt the device for use on boilers generally and to simplify the construction by providing means whereby when the blow-off valve is opened the check-valve will be opened by the movement thereof.

Referring to the drawings by reference letters, *a* designates the casing of the usual check-valve, *b* the inlet-nipple connected to the injector, *c* the outlet-nipple adapted for connection to the boiler, and *d* the usual check-valve provided with the usual depending guides *e*.

Depending from the casing *a* is a portion of a blow-off pipe *f* and seated in the top of this pipe is a blow-off valve *g* having the

form of a check-valve similar in type to the check-valve *d* and having a depending guide *h* of the usual form. This check-blow-off valve is so located with reference to the check-valve proper that when it is lifted it will strike against the lower end of the check-valve and raise the same from its seat.

To lift the check-valve at will I journal a rock-shaft *i* in the blow-off pipe and provide the same with an eccentric *j* directly below the tail of the blow-off valve. The shaft *i* works through a stuffing-box *k* and is provided with an operating-lever *l*.

It will be observed that when it is desired to clean off the seat of the check-valve it is simply necessary to rock the shaft *i* a sufficient distance to cause the eccentric to lift the blow-off valve from its seat far enough to cause said valve to strike against the check-valve and raise it in turn from its seat, whereupon water from the boiler will rush down past the check-valve and out through the blow-off pipe and thus clean away from the check-valve-seat any foreign matter that may have lodged thereon.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a device of the class set forth, a check-valve whose casing is adapted for connection to the injector and the boiler, a blow-off pipe connected to the under side of said casing, a blow-off-check-valve therein below the check-valve, and means for raising the check-valve off its seat through the medium of the blow-off valve.

2. In a device of the class set forth, a check-valve-casing adapted for connection to the injector and the boiler, a check-valve therein, a blow-off pipe connected to said casing, a blow-off valve in said pipe, and means whereby the movement of the blow-off valve in the act of opening will open the check valve.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 15 day of March 1909.

JNO. R. MARTIN.

Witnesses:

WESLEY DRAIN,
C. W. BAILEY.