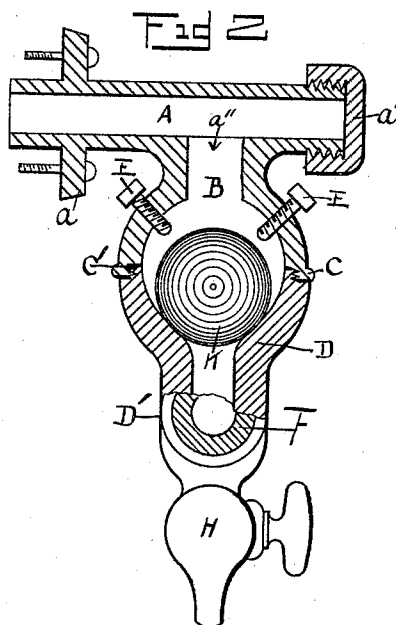
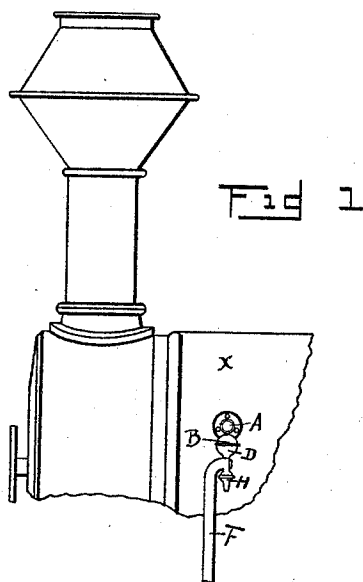


(No Model.)

E. J. SINCLAIR.
CHECK VALVE.

No. 487,298.

Patented Dec. 6, 1892.



WITNESSES:

Andrew J. Sinclair.
Thomas Sinclair

INVENTOR

Edward J. Sinclair

UNITED STATES PATENT OFFICE.

EDWARD J. SINCLAIR, OF OMAHA, NEBRASKA.

CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 487,298, dated December 6, 1892.

Application filed August 1, 1892. Serial No. 441,901. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. SINCLAIR, of Omaha, in the county of Douglas and State of Nebraska, have invented certain useful improvements in Check-Valves; and I do hereby declare that the following is a 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, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to a new and novel boiler check-valve.

The object of this invention is to provide a check-valve that shall be adapted to be used in connection with any boiler and be detachable and adjustable.

In the accompanying drawings, Figure 1 shows a broken section of a locomotive-boiler with my check-valve as attached, while Fig. 2 is an enlarged detail with parts broken away, showing the check-valve as detached.

A represents a metallic tube of a suitable size and thickness, which preferably has one of its ends threaded, and is further provided with the flange *a*, cap *a'*, and the hollow semispherical shell B, forming part thereof. The shell B is preferably cast integral with the tube A, and centrally is provided with an opening or escape-way *a''*, communicating with the tube-opening. The tube is secured to the boiler by means of the flange *a*, provided with suitable screw-openings, and also being held by means of the projecting end of the tube, which is inserted into the opening of the boiler X. The shell B is provided with the circumferential shoulder C, which terminates in the thread C', and is adapted to hold and give a seating to the lower semispherical shell D.

E E represent two set-screws, which pass through and project into the interior of the shell B. The lower shell-section D is centrally provided with a tapering projection D', provided with a threaded opening adapted to hold the pipe F and form, in conjunction with the upper shell B, a globe-chamber, as shown. At the lower end the projection D' ends in an ordinary stop-cock H, as shown. Working within this chamber and the seating at

the lower end thereof is the ball K, of any suitable material, which operates to form an ordinary ball-valve, as shown. By means of the set-screws E E the lift of the ball K is regulated.

The advantage gained by the arrangement of the instrumentalities, as shown, is that by means of the waste-cock H the valve can at any moment be tested, as well as cleaned, in permitting the accumulated mud to escape from below the ball K. So, also, can the whole device be cleaned and freed of scales without removing the valve from the boiler, as the cap *a'* is removable, making it possible to clean the tube A, while the threaded shell D may also be uncoupled in cleaning the interior of the valve.

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

1. In a check-valve, the combination, with a threaded tubular stem provided at one end with a cap and at the other with an attaching-flange, of a semispherical shell threaded at the lower edge, integral with said stem and having a communicating escape-way, a lower semispherical shell screwed to said upper shell and provided with a seating adapted to accommodate a ball, a pipe-opening leading into said lower shell below the valve-seating, and a stop-cock at the lower end of said shell, all arranged to operate substantially as and for the purpose set forth.

2. In a check-valve, the combination, with the tube A, provided with the flange *a*, cap *a'*, threaded upon one end of said tube, and shell B, integral with said tube A, of the set-screws E E within said shell, the lower shell D, screwing into the shell B, provided with the pipe-opening and cock H, and the ball K within said shell, all arranged to operate substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD J. SINCLAIR.

Witnesses:

ANDREW G. SINCLAIR,
JAMES SINCLAIR.