

A. B. POTTS.
FEED WATER STRAINER.
APPLICATION FILED SEPT. 29, 1909.

1,000,843.

Patented Aug. 15, 1911.

Fig. 1.

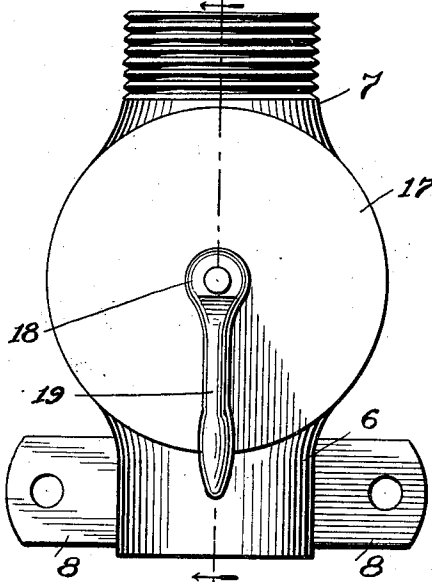


Fig. 2.

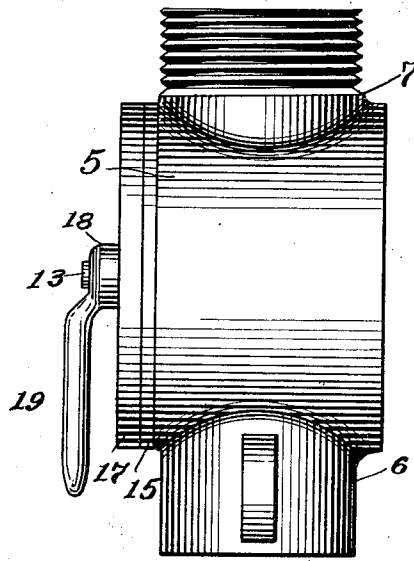


Fig. 3.

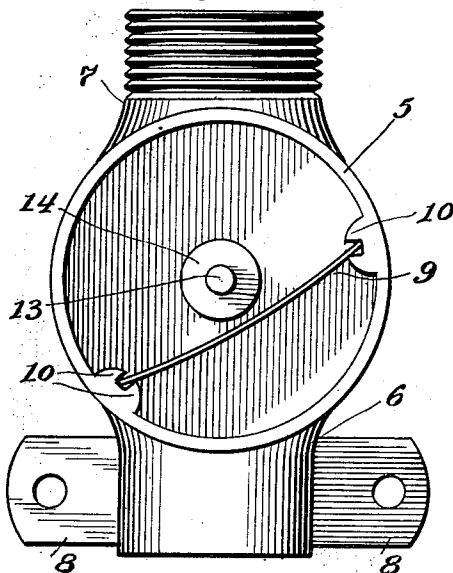
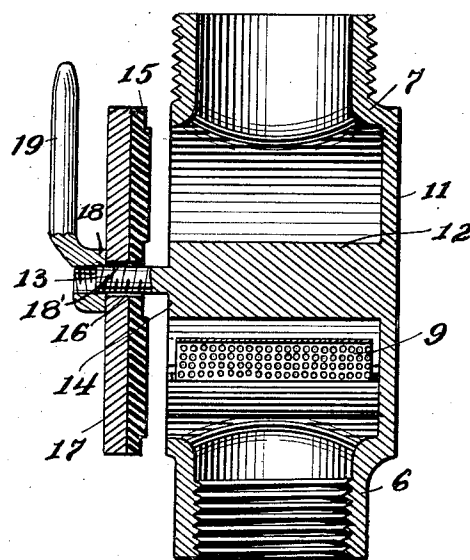


Fig. 4.



Inventor

Albert B. Potts.

By

Chas. J. Stockman
Attorney

Witnesses
Ruth Stockman
Ray Frye.

UNITED STATES PATENT OFFICE.

ALBERT BETHENY POTTS, OF CHATTANOOGA, TENNESSEE, ASSIGNOR TO ROSS-MEEHAN FOUNDRY COMPANY, OF CHATTANOOGA, TENNESSEE, A CORPORATION OF TENNESSEE.

FEED-WATER STRAINER.

1,000,843.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed September 29, 1909. Serial No. 520,130.

To all whom it may concern.

Be it known that I, ALBERT B. POTTS, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Feed-Water Strainers, of which the following is a specification.

This invention relates to certain improvements in water-strainers, and is particularly designed to prevent sediment and foreign substances from entering the boilers of locomotives or stationary engines.

The prime object of the invention is to provide a simple, inexpensive, and efficient strainer, which can be quickly and automatically cleansed without necessitating the removal of the strainer-cover.

A further object is to provide a strainer that can be quickly and easily attached and removed from any of the present couplings in common use upon feed-water pipes.

With these and other objects in view, the invention consists in the novel construction, combination, and arrangement of parts to be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, forming a part of this specification, and in which like reference numerals designate corresponding parts throughout the several views, Figure 1 is a plan view of the preferred form of my invention. Fig. 2 is a side elevation thereof, with the strainer cover in closed position. Fig. 3 is a plan view with the cover removed, and Fig. 4 is a longitudinal section, showing the cover in opened position.

The body of the strainer is of any suitable metal cast or otherwise shaped to form a cylindrical casing 5 open at one end and having an inlet 6 and outlet 7 diametrically opposite one another in the circular side-wall. The inlet 6 is in the herein-exemplified form of my device, internally tapped to fit over one section of the ordinary coupling now commonly used on feed-water pipes, while the outlet 7 is externally threaded to fit within the opposite section of the feed-water coupling. Wings 8 upon the inlet 6 may be employed to enable the operator quickly to attach or remove the strainer.

A screen 9, formed of wire or reticulated metal, having its ends removably secured in channeled lugs 10 on the side-wall of the casing, is so positioned within the casing

that the incoming water will impinge against the screen at an angle, (see Fig. 3) and by virtue of the incline will carry the sediment and foreign matter down the screen and against the side-wall of the casing.

Within the casing and preferably integrally formed with the bottom 11 thereof at substantially its center is a cylindrical post 12, of uniform diameter for a portion of its length and terminating in a threaded shank 13 of reduced diameter, so that a shoulder 14 is formed upon the central post substantially level with the top of the circular side-wall of the casing. A circular washer 15, of rubber, leather, or other suitable material, having a central opening 16 slightly larger than the threaded shank 13 is adapted to fit over said shank and entirely close the casing on this side, being reinforced externally by a metallic cover 17, having a central opening adapted to encircle the threaded shank 13. A threaded lever 18 tapped as indicated by numeral 18' to correspond with the screw-threads upon the shank 13 retains washer 15 and cover 17 upon said shank 13, and is adapted either to compress the washer 15 against the casing wall and the central post, or by a reverse rotation of the lever to allow a longitudinal movement of the washer 15 and the cover 17 away from the casing-wall without completely disengaging them from the shank 13.

The arm 19 of the threaded lever 18 may be of any convenient length to enable the operator to readily compress or loosen the cover and washer without the use of auxiliary tools, and at the same time the threads of the lever and shank form a positive engagement that effectively prevents the dislocation and loss of the lever by the jarring and shaking of the train.

In operation, the water is admitted to the strainer through the inlet 6, and passes through the screen 9 to the outlet 7, being purified and cleansed of foreign substances in its passage. The sediment retained by the inclined screen 9 is carried by the water against the side of the casing and at any time may be removed by loosening the cover 17 and washer 15, the pressure of the water immediately forcing the washer away from the casing and sweeping the collected sediment through the opening thus formed.

Since all that is required on the part of the

operator to flush the strainer is to turn the threaded lever a short distance, it is evident that the strainer may be flushed while the engine is traveling at full speed without danger of losing any of its parts.

It is to be understood that the structure herein described is merely illustrative of a device adapted to accomplish the purposes of this invention, and that changes and modifications may be made in the details thereof within the spirit of this invention as defined in the appended claims.

Having now described the invention, what I believe to be new and desire to secure by Letters Patent, and what I, therefore, claim is:—

1. In a feed water strainer, a cylindrical casing open at one end, a screen removably secured therein, a post connected with and extending from the closed end of the casing, and means secured to said post for tightly closing the open end of the casing.

2. In a feed-water strainer, a cylindrical casing open at one end, a screen removably secured therein, said casing having an inlet and an outlet on opposite sides of said screen, a post connected with and extending from the closed end of the casing, a cover secured upon said post, and means whereby said strainer may be automatically flushed without removing the cover from said post.

3. In a feed-water strainer, a cylindrical casing open at one end, a screen removably secured therein, said casing having an inlet and an outlet on opposite sides of said screen, a central post connected with and extending from the closed end of said casing, and having a threaded shank at its free end, a circular washer surrounding said shank and adapted to close the open end of the casing, a cover surrounding said shank external to said washer, and a threaded lever fitting upon said threaded shank and adapted to firmly hold the washer against the casing, substantially as described.

4. In a feed-water strainer, a cylindrical casing open at one end, a screen removably

secured therein, said casing having an inlet and an outlet on opposite sides of said screen, a central post connected with and extending from the closed end of said casing of uniform diameter for a portion of its length and having a threaded shank of reduced diameter at its free end, a circular washer surrounding said shank and adapted to close the open end of the casing, a cover surrounding said shank external to said washer, and a threaded lever fitting upon said threaded shank and adapted to firmly hold the washer against the casing and the central post, substantially as described.

5. In a feed-water strainer, a cylindrical casing open at one end, a screen removably secured therein, inlet and outlet pipes on opposite sides of said screen, one of said pipes being externally threaded and the other internally threaded, a post within the casing and means secured to said post for tightly closing the open end of the casing, substantially as and for the purpose described.

6. In a feed-water strainer, a casing open at one end, a screen in the casing, a post connected at one end with and extending from the closed end of the casing, a packing washer having an opening therein, a shank projecting from the outer end of the post and extending through said washer opening, clamping means on said shank compressing said washer against the casing and the outer end of the post and sides of the shank thereby sealing the open end of the casing, said clamping means being movable away from the post to permit the washer to be moved along the shank out of engagement with the post and casing to permit flushing without removing the washer and clamping means from the shank.

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

ALBERT BETHENY POTTS.

Witnesses:

G. F. MEEHAN,
F. A. BRAWARD.