No. 723,858. PATENTED MAR. 31, 1903.

C. H. GARY.

STRAINING ATTACHMENT FOR INJECTOR PIPES OR OTHER PURPOSES.

APPLICATION FILED AUG. 4, 1902.

NO MODEL.

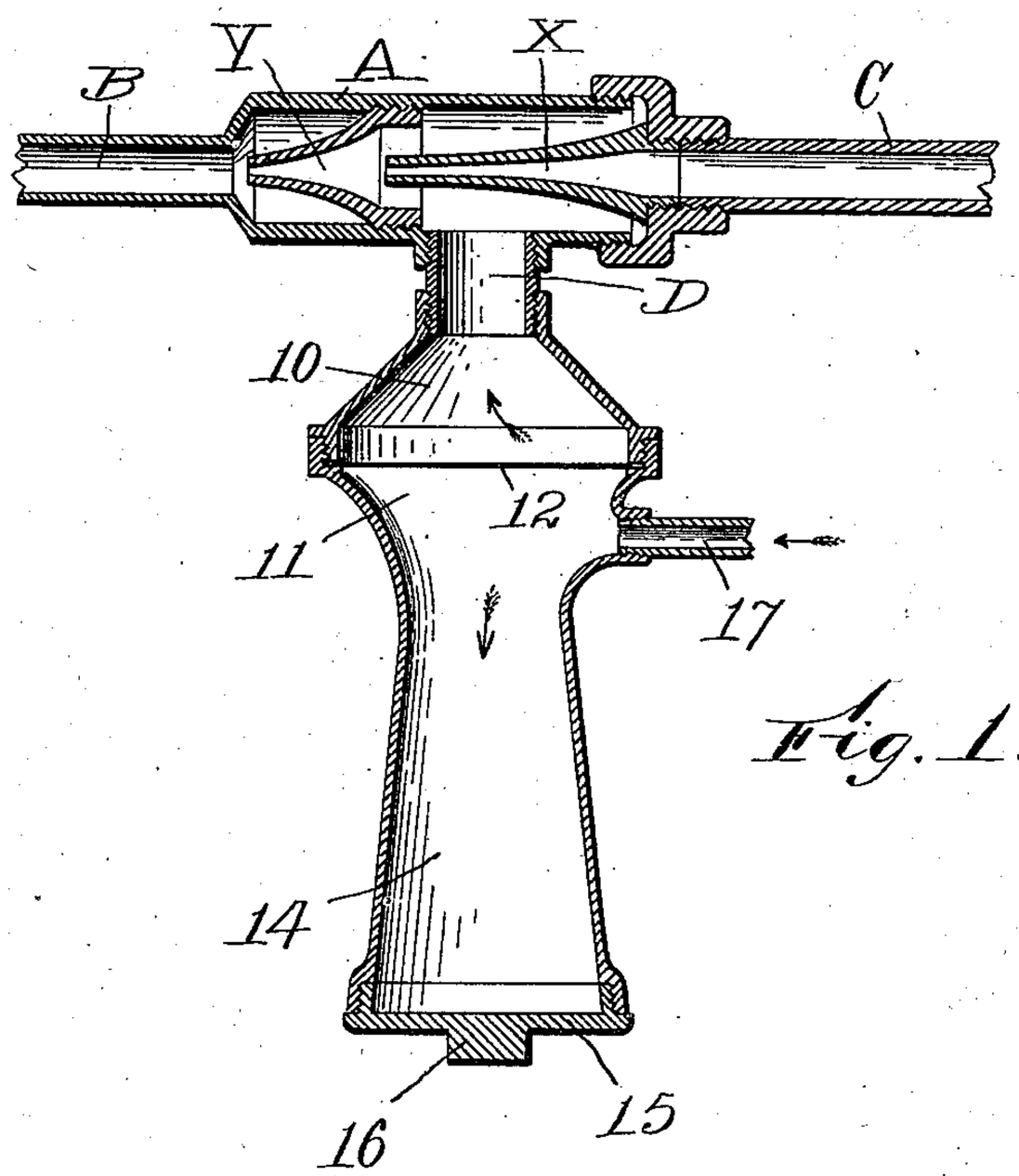


Fig. 1.

Fig. 2.

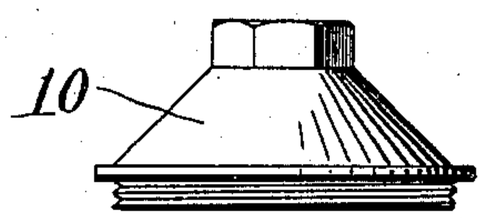


Fig. 3.

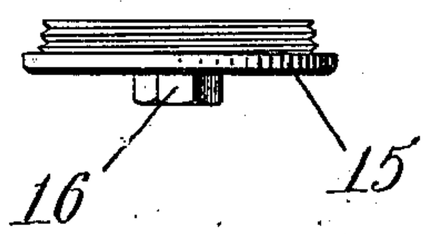
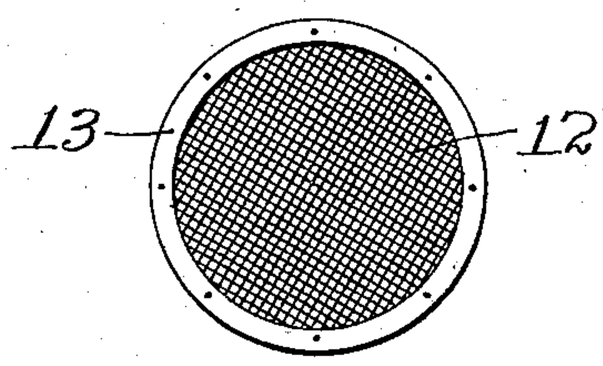


Fig. 4.



Witnesses:
C. F. Wesson.
M. E. Regan.

Inventor:
C. H. Gary.
By
Southgate & Southgate
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES H. GARY, OF ERVING, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLIAM N. WASHBURN, OF GREENFIELD, MASSACHUSETTS.

STRAINING ATTACHMENT FOR INJECTOR-PIPES OR OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 723,858, dated March 31, 1903.

Application filed August 4, 1902. Serial No. 118,212. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. GARY, a citizen of the United States, residing at Erving, in the county of Franklin and State of Massachusetts, have invented a new and useful Straining Attachment for Injector-Pipes or other Purposes, of which the following is a specification.

This invention relates to an attachment for improving the action of injectors by preventing the entrance of foreign matters into the injector-casing and for other purposes.

The especial object of this invention is to provide a strong, simple, and inexpensive attachment for straining a supply of water in which the parts are so arranged that foreign matter will be arrested and allowed to fall directly down into a mud-drum, the mud-drum being provided with a removable section near its bottom to permit the same to be cleaned out.

To these ends this invention consists of the attachment and of the combinations of parts therewith, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a sectional view of an injector combined with a straining attachment constructed according to this invention. Fig. 2 is a detail view of the conical casting which forms the upper part of the screen-casing. Fig. 3 is a detail view of the cap which closes the lower end of the mud-drum, and Fig. 4 is a detail plan view of the screen.

In using injectors for supplying water to boilers or for similar purposes reliability of action is frequently interfered with by the entrance of foreign matter into the injector-casing.

To provide an injector which can be readily started into operation, it is essential that the inlet-passage for the water should be substantially unobstructed. On the other hand, when an injector has been started into operation the water is drawn into the injector-casing with considerable force.

To provide a straining attachment which will work efficiently in connection with an injector, it is essential, therefore, to provide a construction which will leave the inlet-passage for the water substantially unobstructed and in which the particles of foreign matter will not be retained upon the screen.

To accomplish these objects, a straining attachment for injectors constructed according to this invention comprises a casing in which a screen may be mounted and a mud-drum in which the matter which is arrested by the screen will be allowed to collect.

The screen is preferably arranged horizontally, and the mud-drum is located directly below the screen in position so that the arrested matter will fall down into the mud-drum by gravity—that is to say, in a straining attachment constructed according to this invention the parts are preferably so arranged that the screen is substantially self-cleaning and will not materially obstruct the supply of water for the injector, while at the same time it will absolutely prevent foreign matter from being drawn into the injector-casing.

Referring to the accompanying drawings for a detail description of an attachment constructed according to my invention, as illustrated in Fig. 1, A designates an injector-casing, mounted in which is a nozzle X and a hood Y. Leading from the injector-casing is an outlet-pipe B, which may be used for supplying water to a boiler or for other purposes. Connected to the other end of the injector-casing A is a steam-pipe C, through which steam is admitted to the nozzle in the ordinary manner. These parts may be of substantially the ordinary construction and need not be herein described at length. Threaded into the side of the injector-casing A is a water-supply pipe B, and threaded onto the lower end of the water-supply pipe D is a straining attachment constructed according to this invention.

As herein illustrated, the casing of my straining attachment comprises a conical or frustum-shaped casting 10, having a hexag-

onal wrench-section. Threaded onto the lower end of the conical casting 10 is a casting 11. The castings 10 and 11 are fitted together, so that a screen 12 may be clamped in place between them to occupy a substantially horizontal position.

As illustrated most clearly in Fig. 4, the screen 12 is preferably provided with a binding 13.

Threaded into the side of the casting 11 is an inlet-pipe 17.

In practice the inlet-pipe 17 is preferably of smaller diameter than the water-supply pipe D. The inlet-pipe 17 is of sufficient size so that the required supply of water can pass through the same and supply the injector, while the pipe D is enough larger so that in connection with the screen it will not materially obstruct or diminish the supply of water to the injector-casing.

At its lower end the casting 11 is enlarged to form a mud-drum, and threaded into the lower end of the casting 14 is a removable cap 15, having a hexagonal wrench-section 16.

In actual practice I have found that by the use of a straining attachment as thus constructed I am enabled to employ injectors which may be supplied with muddy or roiled water without interfering with the reliability of the action of the injectors—that is to say, by the use of attachments constructed according to this invention the screens are substantially self-cleaning and do not materially obstruct the water-supply, while at the same time they will efficiently screen the water and prevent foreign matter from entering the injector-casings.

I am aware that changes may be made in the construction of my injector attachments by those who are skilled in the art and that in some instances attachments constructed according to my invention may be used for other purposes than for straining the water-supplies of injectors. I do not wish, therefore, to be limited to the construction which I have herein shown and described; but

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of an injector-casing, a supply-pipe opening into the injector-casing, and a straining attachment for the water-supply having a screen for arresting solid matter, with a mud-drum which may be opened for the removal of matter held back by the screen.

2. The combination of an injector-casing, a water-supply pipe opening into the injector-casing, and a straining attachment for the water-supply comprising a casing, a screen secured in said casing to occupy a substantially horizontal position, and a mud-drum below the screen, with an opening at the lower end of the mud-drum through which the matter held back by the screen may be removed.

3. As an article of manufacture, a straining attachment, comprising a casing consisting of a conical casting having an outlet from the upper end thereof, and a mud-drum casting, a screen secured in horizontal position between said castings, and a removable cap for closing the lower end of the mud-drum.

4. As an article of manufacture, a straining attachment, comprising a casing consisting of a conical casting having an outlet at its upper end, a mud-drum casting having an enlarged lower end, a screen secured in horizontal position between said castings, a supply-pipe of smaller diameter than the outlet opening into the mud-drum casting immediately below the screen, and a removable cap closing the lower end of the mud-drum.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES H. GARY.

Witnesses:

CHANNEY B. TANNER,

ELISHA A. ALLEN.