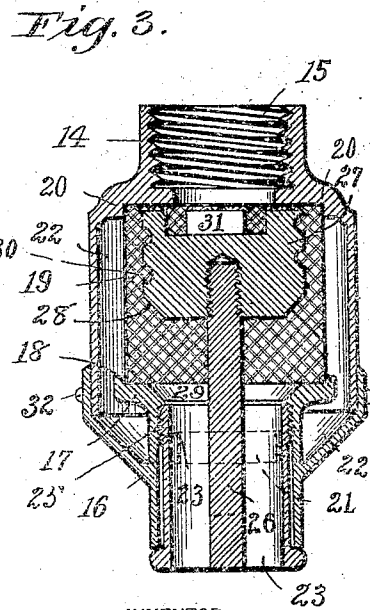
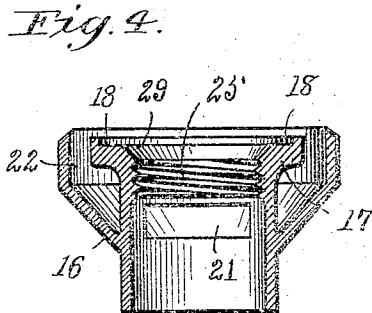
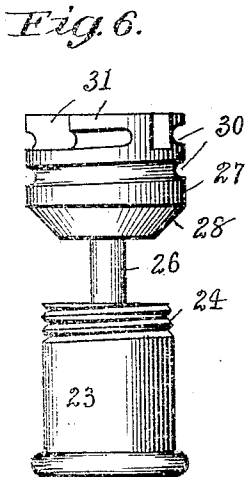
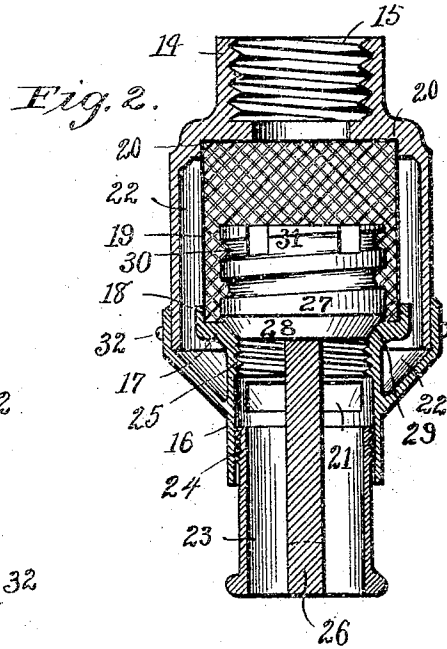
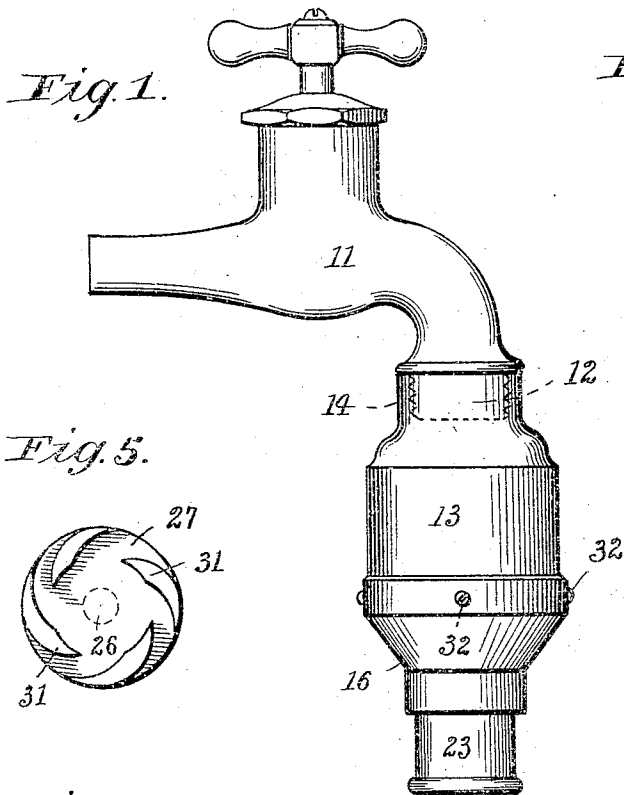


G. W. COLLIN.
WATER STRAINER.
APPLICATION FILED SEPT. 23, 1903.

948,311.

Patented Feb. 8, 1910.



WITNESSES

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GEORGE W. COLLIN, OF BRIDGEPORT, CONNECTICUT.

WATER-STRAINER.

948,311.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed September 23, 1908. Serial No. 454,424.

To all whom it may concern:

Be it known that I, GEORGE W. COLLIN, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Water-Strainers, of which the following is a specification.

My invention relates to new and useful improvements in water strainers, such as are employed for attachment to water faucets in houses and like places for cleaning the water as it is drawn from the faucet.

It is the purpose of the invention to provide an attachable strainer which is adapted to be applied to standard makes of faucets; to design the strainer so that it may readily be cleaned at any time by a slight adjustment of some of its parts, and with a direct flow of water therethrough from the faucet, thus obviating the necessity of removing the strainer for cleansing should it become choked or clogged by reason of an accumulation of dirt therein, and finally to make it simple and efficient so as to insure a ready sale at a comparatively small figure.

With the above objects in view my invention resides and consists in the novel construction and arrangement of parts shown upon the accompanying drawings forming a part of this specification, upon which similar characters of reference denote like or corresponding parts throughout the several figures and of which,

Figure 1, shows a side elevation of a water faucet having my improved strainer attached thereto. Fig. 2, is a slightly enlarged central vertical longitudinal section of the strainer, the parts being in position shown in Fig. 1. Fig. 3, is a similar central vertical longitudinal section of the strainer, but with the adjustable parts thereof in their raised position as required when cleaning the device. Fig. 4, is a detached cross sectional view of the lower portion of the casing, as shown in Figs. 2 and 3. Fig. 5, is a detached plan view of the adjustable head carried within the body of the strainer, as shown in Figs. 2 and 3, and Fig. 6, is a detached side elevation of the said head and the adjustable tube to which the head is connected.

Referring in detail to the characters of reference marked upon the drawings 11 represents a common form of water faucet and 12 its threaded end portion to which my novel strainer is detachably connected. The

strainer is formed of several parts which may be made from either cast or sheet metal, or both as desired, and is of a general cylindrical form, though of a special shape and design with a view of producing not only a practical strainer but one that is attractive as well.

The upper cylindrical portion 13 of the casing of the strainer is provided with a reduced neck 14, having a threaded opening 15 therein for attachment to the threaded end 12 of a faucet. To the lower edge portion of this casing is secured a conical shaped base 16 that includes an internal hub 17 with an annular shelf 18 upon which is seated one end of a tubular wire, or perforated sheet metal screen 19, the opposite end of which screen is seated in an annular pocket 20 of the inner end of the upper casing 13.

From the foregoing description it will be seen that an annular compartment 22 is formed intermediate of the cylindrical shell 13 and the tubular screen 19 and likewise between the outer shell 16 and the hub 17 of the lower member of the strainer case and that when attached as shown in Fig. 1, the water enters through the opening 15, passes through the compartment 22, from there through the openings 21 in the vertical walls of the hub 17, and then out through the lower portion of the said hub and the adjustable sleeve 23 mounted therein. This is the normal position of the strainer as when drawing water therethrough from the faucet, and has the effect of retaining all the foreign particles of dirt or other objectionable matter which may be in the water against the inside of the tubular screen.

It will thus be apparent that in the employment of a tubular screen of this kind a very much larger area of perforated straining surface is obtained, than would be, were a plain flat screen laid over the end of the faucet as has heretofore been done, thus insuring a longer use of the strainer without cleaning than would be possible in the old way. The cleaning of the screen is effected by adjusting the movable parts of the screen so as to allow the water to flow through the inside of the tubular screen and out at the lower end without compelling it to pass through the perforations and at the same time to congest it and direct it helically to increase the friction of the water against the screen and insure a thorough cleaning of the surface.

The means of accomplishing the above features resides in an adjustable device comprising in part the tube 23 with its upper peripheral surface 24 threaded for engagement with the threaded portion 25 of the hub so that when the said tube is raised from the position shown in Fig. 1, to that shown in Fig. 3, and turned in the right direction the threads will engage one with the other and the shell thus screwed up in position. The shell is provided with a central stem 26 to the upper end of which is connected a special shaped head 27 having a lower beveled surface 28 that forms a valve to rest upon the seat 29 within the hub 17 to close the passage from the lower end of the tubular screen to the outlet and to insure the passage of the water through the perforations of the screen chamber 22 and openings 21 to discharge.

From the foregoing it will be noted that when the head and tube are raised as seen in Fig. 3, the said tube will cover the openings or ports 21 and close the same in a way to prevent the water from flowing therethrough and consequently compelling it to pass direct through the screen.

The peripheral surface of the head is provided with helical grooves 30 and upon the top end is formed wings 31 which operate in conjunction with the helical grooves to deflect the water helically against the screen from top to bottom so that when the parts are adjusted to the position shown in Fig. 3, the water will be precluded from passing through the perforations of the screen and chamber and will be forced against the screen in a way to obtain a scouring and cleansing effect thus removing all deposits therefrom without the removal of the strainer.

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

1. In a water strainer of the class described, the combination of a cylindrical casing having suitable openings therein, a cylindrical screen within the casing, means for directing the water either through the perforations of the screen or helically against the inner face of the tubular screen and out through its lower open end.

2. In a water strainer of the class described, the combination of a cylindrical

casing having openings at each end, a cylindrical screen mounted in the casing and spaced therefrom, an adjustable tube within the casing and having means formed thereon for directing the water helically against the screen for cleaning the same.

3. In a water strainer of the class described, the combination of a cylindrical casing having a suitable inlet and outlet and perforated lower hub portion, a cylindrical screen within the casing and spaced therefrom to form a water passage around the screen above the perforated hub portion, and an adjustable tube for closing said perforations.

4. In a water strainer of the class described, the combination of a cylindrical casing with suitable openings therein and a hub within its lower end portion having ports therein, a cylindrical screen intermediate the said hub and the upper inner end portion of the casing, a valve seated in the hub to close the openings therethrough from lower end of screen, and a tube within the hub to close the ports therein.

5. In a water strainer of the class described, the combination of a cylindrical casing having suitable openings therein and an intermediate ported hub within its lower end portion, a cylindrical screen intermediate the said hub and the upper inner end portion of the casing, a valve seated in the hub to close the openings therethrough from lower end of screen, and means connected with the valve for raising and supporting the same above its seat to permit of a direct flow of water through the tubular screen.

6. In a water strainer of the class described, the combination of a casing having suitable openings therein and an intermediate perforated portion, a cylindrical screen within the casing, a valve within the casing for closing the lower end of the screen, a tube connected with the valve and adapted to open and close the perforation before mentioned simultaneously with the operation of the valve.

Signed at Bridgeport in the county of Fairfield and State of Connecticut this 19th day of September, A. D. 1908.

GEORGE W. COLLIN.

Witnesses:

C. M. NEWMAN,
RUTH RAYMOND.