April 12, 1932. B. F. BENNER 1,853,597

WATER PRESSURE REDUCING DEVICE

Filed Oct. 1, 1931

Fig. 1.

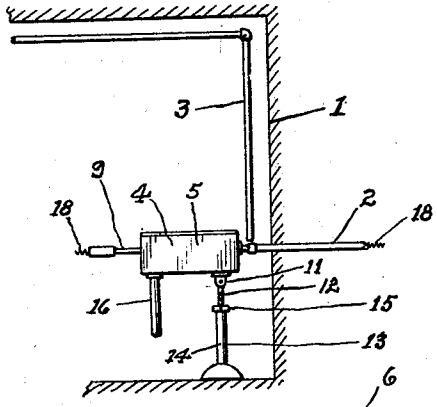


Fig. 2.

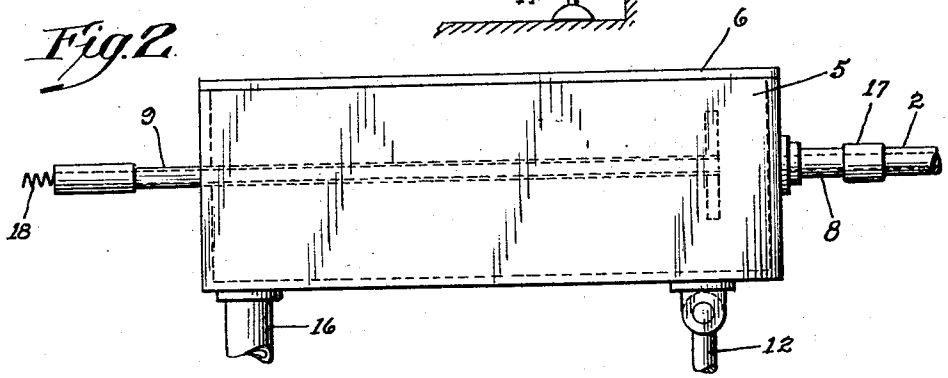


Fig. 3.

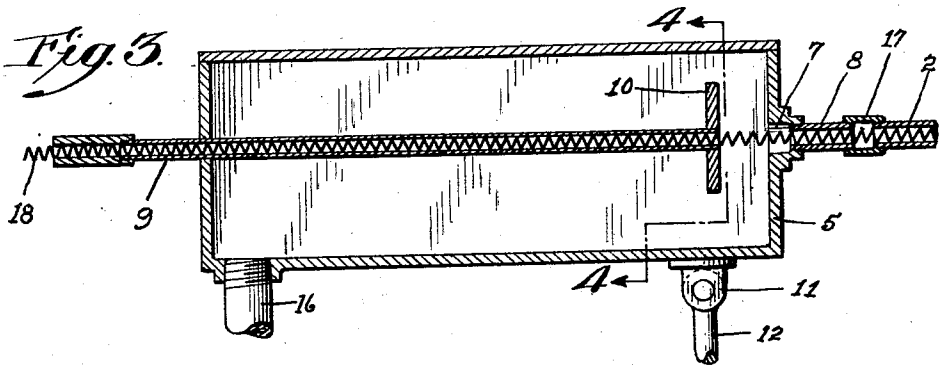
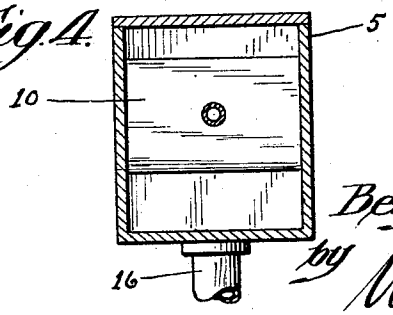


Fig. 4.



Inventor
Benjamin F. Benner
by Watson E. Coleman.
Attorney

Patented Apr. 12, 1932 1,853,597

UNITED STATES PATENT OFFICE

BENJAMIN F. BENNER, OF PHILADELPHIA, PENNSYLVANIA

WATER-PRESSURE REDUCING DEVICE

Application filed October 1, 1931. Serial No. 566,331.

This invention relates to devices for the use of plumbers and pertains particularly to a device for reducing the pressure of water discharging from a pipe line, for the protection of the plumber while he is operating a cleaning device in the pipe.

In house plumbing systems it frequently becomes necessary to clean out the pipe line leading from the street main into the house and in doing this the plumber must operate a cleaning tool in the pipe against the pressure of water escaping therefrom.

The primary object of the present invention is to provide a device which will operate to protect the plumber while cleaning out the pipe line, without in any manner interfering with the operation of the pipe cleaning tool.

The device broadly contemplates the provision of a casing of elongated design which has a tube extended through one end and terminating therein at a point adjacent the opposite end in a baffle board through which the tube extends and which extends entirely across the casing. In alignment with this tube at said other end of the casing is a pipe coupling which opens into the casing and with which the inner end of the water inlet pipe is coupled. In addition to means for supporting the casing in working position, there is provided an outlet through the bottom through which the water is permitted to escape instead of discharging over the plumber as is the case when cleaning out inlet pipes without the benefit of a device of the character embodying the present invention.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:—

Figure 1 represents a fragmentary view of a building basement showing the water inlet pipe from the supply main and showing the device embodying the present invention coupled thereto;

Figure 2 shows the device embodying the present invention in side elevation;

Figure 3 is a vertical longitudinal sectional view through the present device;

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 3.

Referring now more particularly to the drawings wherein like numerals of reference indicate corresponding parts throughout the several views, the numeral 1 indicates a portion of a building foundation wall through which there passes the usual water pipe 2 which leads from a main water pipe or main (not shown) to the interior of a building where it is coupled with the building water pipe line 3.

The usual elbow coupling between the inlet pipe 2 and the pipe 3 is not shown as this has been removed to show the application of the device embodying the present invention.

The present water reducing device is indicated generally by the numeral 4 and as shown this consists of an elongated casing 5 which is here shown as of rectangular cross section, although it may be of any cross sectional design. This receptacle or casing 5 has a removable cover 6 and one end is provided with an inlet opening 7 with which is connected a nipple 8. Extending through the opposite wall of the casing is a pipe 9 which extends forwardly to a point adjacent the forward end thereof through which the opening 7 is formed and terminates in a baffle plate 10 which extends completely across and is supported in the casing as shown in Figure 4. The upper and

lower edges of the baffle plate 10 terminate short of the top and bottom walls of the casing thus providing passages through which water may pass from the inlet opening 7 to the rear end of the casing. This pipe 9 passes through the baffle plate or wall 10 and is aligned with the opening 7.

The bottom of the casing 5 has secured thereto adjacent the forward end, an ear 11 with which is pivotally attached a rod 12 which forms one of two members of a supporting element or pedestal which is indicated as a whole by the numeral 13, the other member being indicated by the numeral 14. The member 14 is tubular to receive the rod 12 and the rod has threaded thereon a nut 15 which may be shifted for adjustment to any position and which rests upon the upper end of the tubular section 14 in the manner shown in Figure 1.

It will thus be seen that the height of the casing 5 may be readily controlled.

Adjacent the rear end of the casing the bottom has a discharge pipe 16 connected therewith through which water received by the casing may be carried off.

In the use of the present water reducing device the nipple 8 is coupled by a suitable coupling sleeve 17 with the inner end of the inlet pipe 2 in the manner shown in Figure 1 so that the water passing through the pipe 2 will discharge into the casing 5 against the baffle board or wall 10 and will then flow out through the pipe 16. The plumber is thus able to insert the spiral flexible rod 18 into the pipe 2, through the pipe 9 as illustrated in Figure 3 and effect the removal of rust or sediment from the pipe 2 without himself becoming wet or having to receive the force of water escaping through the pipe 2 as would be the case if the present device were not employed.

From the foregoing it will be readily apparent that with a device of the character herein described the cleaning of a water inlet pipe may be accomplished more readily and with less unpleasantness for the workman than has heretofore been the case.

Having thus described the invention, what I claim is:—

1. A pressure reducing device of the character described comprising a hollow body having an inlet and an outlet, means for coupling a pipe with said inlet, and means within the body facilitating the extension of an instrument through the inlet opening into a pipe coupled therewith for effecting the cleaning of said pipe.

2. A water pressure reducing device of the character described, comprising a tubular body designed to receive a pipe cleaning instrument, means constituting a baffle plate for supporting an end of said tubular body in alignment with a pipe into which said instrument is introduced, and means constituting a coupling between said baffle plate and said pipe.

3. A water pressure reducing device of the character described comprising a hollow body, means for coupling an end of a water pipe with a wall of the body for discharge thereinto, an outlet for the body, a support in the body adjacent said wall, and a tube extending through a wall opposite said first wall and through said support and aligned with the said pipe coupling means for facilitating the extension of an instrument into a pipe connected with the said coupling means.

4. A pressure reducing device of the character described comprising an elongated casing, means for coupling a pipe with one end wall of said casing for discharge thereinto, an outlet for said casing, a tube extending through the other end wall of the casing and longitudinally therethrough to a point in proximity to the first end wall and aligned with the pipe coupling means, a baffle plate extending transversely of the casing adjacent the first wall and having said tube extending therethrough, and supporting means for the casing.

5. A pressure reducing device of the character described comprising an elongated casing, means for coupling a pipe with one end wall of said casing for discharge thereinto, an outlet for said casing, a tube extending through the other end wall of the casing and longitudinally therethrough to a point in proximity to the first end wall and aligned with the pipe coupling means, a baffle plate extending transversely of the casing adjacent the first wall and having said tube extending therethrough, and vertically adjustable supporting means for the casing.

6. A pressure reducing device of the character described, comprising a baffle member, an elongated tubular body connected with and opening at one end through said baffle member, and means for holding said baffle member before the end of a pipe which is to be cleaned, with said body aligned with the pipe for the extension of a cleaning element through the body into the pipe.

In testimony whereof I hereunto affix my signature.

BENJAMIN F. BENNER.