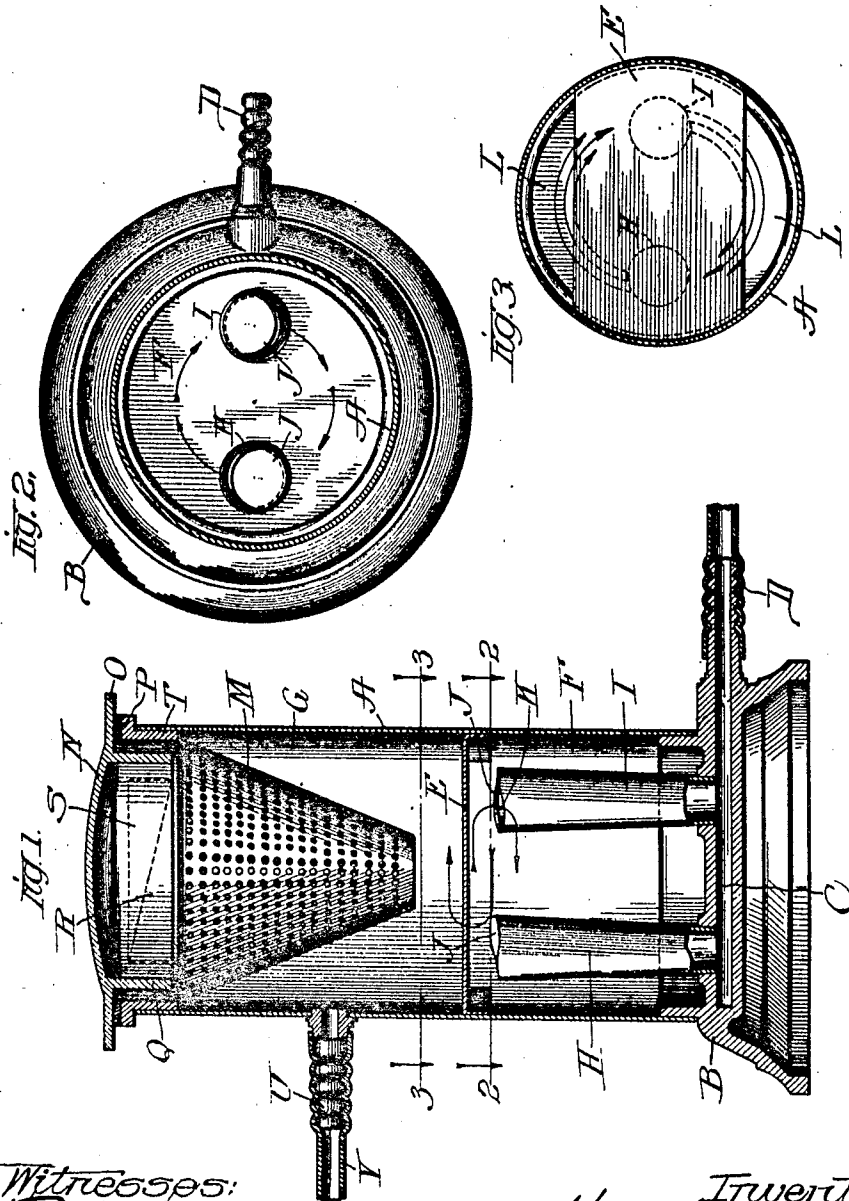


H. J. CALHOUN.
CONDUIT CLEANSING APPARATUS.
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1,049,808.

Patented Jan. 7, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

HOMER J. CALHOUN, OF CHICAGO, ILLINOIS.

CONDUIT-CLEANSING APPARATUS.

1,049,808.

Specification of Letters Patent.

Patented Jan. 7, 1913.

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To all whom it may concern:

Be it known that I, HOMER J. CALHOUN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Conduit-Cleansing Apparatus; and I do hereby declare the following to be 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.

This invention has for its object to provide a simple and efficient device particularly adapted for cleansing beer pipes and other conduits, and consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings illustrating the invention: Figure —1— is a view in central vertical longitudinal section of a beer pipe cleaner embodying my invention. Fig. —2— is a horizontal section of the same on the line 2—2 of Fig. —1—. Fig. —3— is a similar section on the line 3—3 of Fig. —1—.

My device has for its particular object to provide means whereby water under pressure is forced through the pipes to be cleaned and which prior to its admission to the pipes is admixed with a chemical compound exposed to its action and which is dissolved thereby.

A further object of the invention is to so feed the water as to produce a vibration in the apparatus during the continuance of its flow which is imparted to and transmitted by the water to all parts through which it flows and which aids the cleansing action during its passage through the conduits to be cleaned.

The device embodying my invention consists of a cylindrical casing A comprising a cylindrical shell rigidly mounted upon a base B which is cast or otherwise produced and which is provided with a passage C for water adapted to be connected by means of a flange or nipple D with a source of supply of water under pressure. The said casing A is divided by means of a partition wall E disposed between the ends thereof into two chambers F and G, respectively. In the chamber F two discharge nozzles H and I are contained, the latter being vertically disposed and at their lower ends communicating with the passage C.

Each of the said nozzles H and I is slightly tapered and of larger diameter at its upper than at its lower end, and is provided with a cap J which is secured on a part of its circumference to the circumferential wall of the nozzle, one portion of each of said caps being free and bent slightly upwardly thereby providing a narrow discharge opening K for the water. The said nozzles H and I are disposed at diametrically opposite points on either side of the vertical axis of the shell A and said discharge openings K thereof are disposed to project the water in diametrically opposite directions so as to cause the discharge from each to circulate around said chamber F in the same direction in an obvious manner.

The partition wall E is cut away at diametrically opposite points to provide passages L establishing communication between the chambers F and G, the water being adapted to pass upwardly into the chamber G therethrough. By reason of the large size of the passages L the rotary movement of the water entering said chamber G continues. Secured in the upper end portion of said chamber G and extending to a point adjacent the partition wall E is a funnel-shaped strainer M open at its lower end and which is adapted to contain chemical compound in crystal or lump form. The said chamber G is closed by means of a removable cover N provided with a peripheral flange O between which and the upper end of the casing A a gasket P is interposed. The said cap N is also provided with a cylindrical flange Q provided at diametrically opposite points on its external face with segmental projections R having inclined or helical upper faces which are adapted to engage similar lower faces on similar segmental projections S on the inner face of the flange T mounted in the upper end of the casing A, said cap being adapted when said segmental projections R and S engage each other and said cap is rotated in one direction relatively to the casing A to draw said cap down thereby compressing said gasket P and forming a fluid tight joint between said cap and said casing. The water containing the chemical in solution is discharged from the chamber G through the flange or nipple U into the pipe or conduit to be cleaned, connection with the latter being established by means of a flexible

tube V in a well-known manner. The water under pressure entering said chamber F through said nozzles H and I is so projected as to cause a vibration of the caps J or the nozzles as a whole which is communicated to the water and through the same to the casing and parts connected therewith. I have found in practice that this vibration greatly facilitates the loosening of particles from the walls of the pipes to be cleaned and thus accelerates the cleansing of the same and renders it far more thorough than would otherwise be the case.

I claim as my invention:

1. Apparatus of the kind specified comprising a casing divided into an upper and a lower compartment, communicating with each other through passages, a foraminated container for soluble chemical in solid form mounted in one of said compartments, a cover for said compartment, means for connecting the same with a conduit to be cleaned, means for connecting a source of supply of water, and means in said last-named compartment adapted to be vibrated by the admitted water, substantially as and for the purpose set forth.

2. Apparatus of the kind specified comprising a casing divided into an upper and a lower compartment, communicating with each other through passages, a foraminated container for soluble chemical in solid form mounted in one of said compartments, a cover for said compartment, means for connecting the same with a conduit to be cleaned, means for connecting a source of supply of water, and means in said last-named compartment for projecting the admitted water in a direction to impart rotary movement to contained water around the vertical axis of the casing, said projecting means including means adapted to be

vibrated by the projected water, substantially as and for the purpose set forth.

3. Apparatus of the kind specified comprising a casing divided into an upper and a lower compartment, communicating with each other through diametrically oppositely disposed passages, a foraminated funnel-shaped container for soluble chemical in solid form mounted in one of said compartments, a cover for said compartment, means for connecting the same with a conduit to be cleaned, means for connecting a source of supply of water, and means in said last-named compartment adapted to be vibrated by the admitted water, substantially as and for the purpose set forth.

4. Apparatus of the kind specified comprising a casing divided into an upper and a lower compartment, communicating with each other through diametrically oppositely disposed passages, a foraminated funnel-shaped container for soluble chemical in solid form mounted in one of said compartments, a cover for said compartment, means for connecting the same with a conduit to be cleaned, means for connecting a source of supply of water, and means in said last-named compartment for projecting the admitted water in a direction to impart rotary movement to contained water around the vertical axis of the casing, said projecting means including means adapted to be vibrated by the projected water, substantially as and for the purpose set forth.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

HOMER J. CALHOUN.

Witnesses:

RUDOLPH WM. LOTZ,
MAE M. BOYLE.