W. COLINA & M. McL. REID.

PIPE CLEANER.

APPLICATION FILED MAY 13, 1910.

986,268.

Patented Mar. 7, 1911.

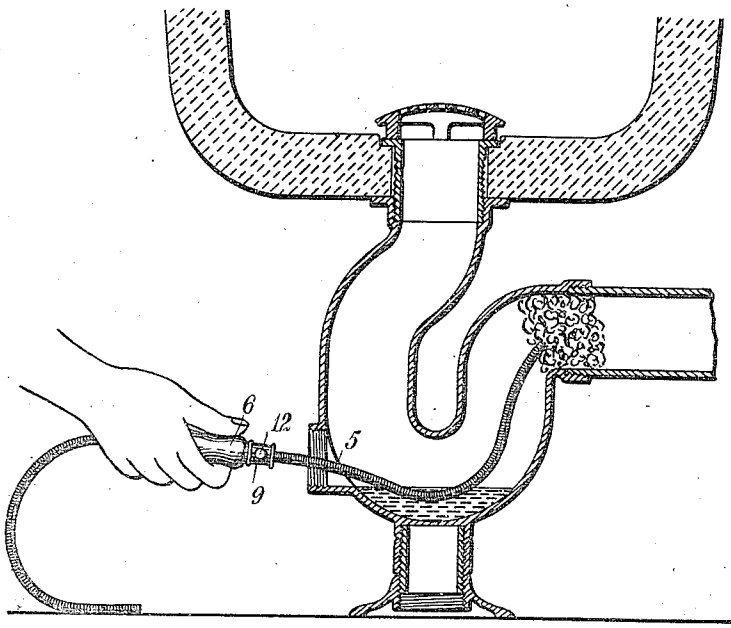


FIG. 1.

FIG. 2.

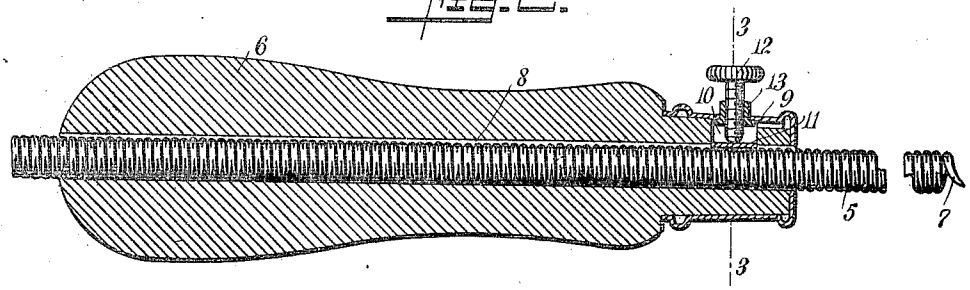
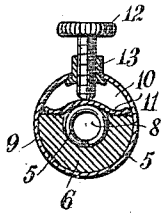


FIG. 3.



WITNESSES:

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PIPE-CLEANER.

986,268. Specification of Letters Patent. Patented Mar. 7, 1911.

Application filed May 13, 1910. Serial No. 561,122.

To all whom it may concern:

Be it known that we, WILLIAM COLINA, a citizen of the United States, and MALCOLM M. REID, a subject of the King of Great Britain, both residents of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and Improved Pipe-Cleaner, of which the following is a full, clear, and exact description.

The invention has reference to pipe cleaners, particularly for cleaning out waste pipes of sinks, wash trays, etc., that have become choked, and belongs to that class of such devices as embodies a cleaning member possessing sufficient flexibility to pass sharp bends in pipes, such as are encountered in waste traps; and of a torsional nature, so that the obstruction can be bored as well as punched out, or threaded or similarly engaged on the end of the cleaning member so as to pass out with the member when the latter is withdrawn.

The invention has in view a cleaner of the above character, having a tubular handle through which the cleaning member passes and is adapted to extend to either side thereof, the handle having an effective spring clamping device for securing it in adjusted position at substantially any point along the length of the cleaner.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a view illustrating a pipe cleaner constructed in accordance with our invention as used in cleaning out a waste trap, the latter, as also the sink above, being shown in vertical section; Fig. 2 is a side view of the cleaner, showing the handle in central longitudinal section; and Fig. 3 is a section substantially on the line 3—3 of Fig. 2.

The cleaner comprises a relatively long cleaning member 5, of a torsional character, and a handle or other suitable operating device 6, which is adjustable along the length of the member, the member having sufficient stiffness to allow a substantial pressure to be brought to bear on the obstruction in the pipe, and at the same time possessing the requisite flexibility to make a comparatively sharp turn as is encountered, for example, in a waste trap. To this end we preferably construct the cleaning member in the nature of a helical spring, as shown, the spring being preferably close wound so as to be but slightly, if at all, susceptible to endwise compression. The working end of the spring is, as shown in Fig. 2, drawn out and sharpened to provide a cork-screw point 7, which adapts the cleaner to engage with a piece of waste or other fibrous obstruction, as shown in Fig. 1, by a threading action, and cause the waste or material to be withdrawn from the pipe when the cleaner is removed.

The handle 6 has a bore 8 of sufficient size for the free passage of the spring 5 without undue looseness, and at its inner end is covered with a ferrule 9. At a point inclosed by the ferrule the handle is transversely slotted, as indicated at 10, which slot extends to and slightly inwardly of the bore 8, and receives a spring 11, the spring, as best shown in Fig. 3, seating at each end on the handle and having a central arched portion extending over the cleaning member 5. Directly opposite the arched portion of the spring 11, a binding or set-screw 12 is threaded through a reinforcing boss 13, carried by the ferrule, and is adapted to forcibly press the spring 11 to the helical cleaning member and prevent relative movement between the latter and the handle. The spring is so constructed that the arch at the center stands slightly above the helical cleaner when it is released by the set-screw, thus enabling the adjustment of the handle on the cleaning member without undue friction. If desired, the helical cleaning member may be constructed of a number of sections which are adapted to be suitably detachably connected, whereby the cleaning member may be added to or diminished in length, as required by the character of the work.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A pipe cleaner comprising a flexible torsional cleaning member, and a handle adjustable along the length of the member, having a spring clamp arranged to bindingly engage the latter.

2. A pipe cleaner comprising a relatively long cleaning member, a handle having a bore through which the member is adapted to pass, a spring clamping member arranged

within the handle and having a portion arched over the cleaning member, and a set-screw threaded into the handle and arranged to bear on the arched portion of the spring clamping member and press the latter into binding engagement with the said cleaning member.

3. A pipe cleaner comprising a flexible torsional cleaning member, a tubular handle through which said member is adapted to pass and extend to either side thereof, and means for adjustably securing the handle against turning on the member.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM COLINA.
MALCOLM McLAIN REID.

Witnesses:
JOHN J. McCANN,
MARY J. GERAGHTY.