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TOOL FOR CLEANING WASTE PIPES

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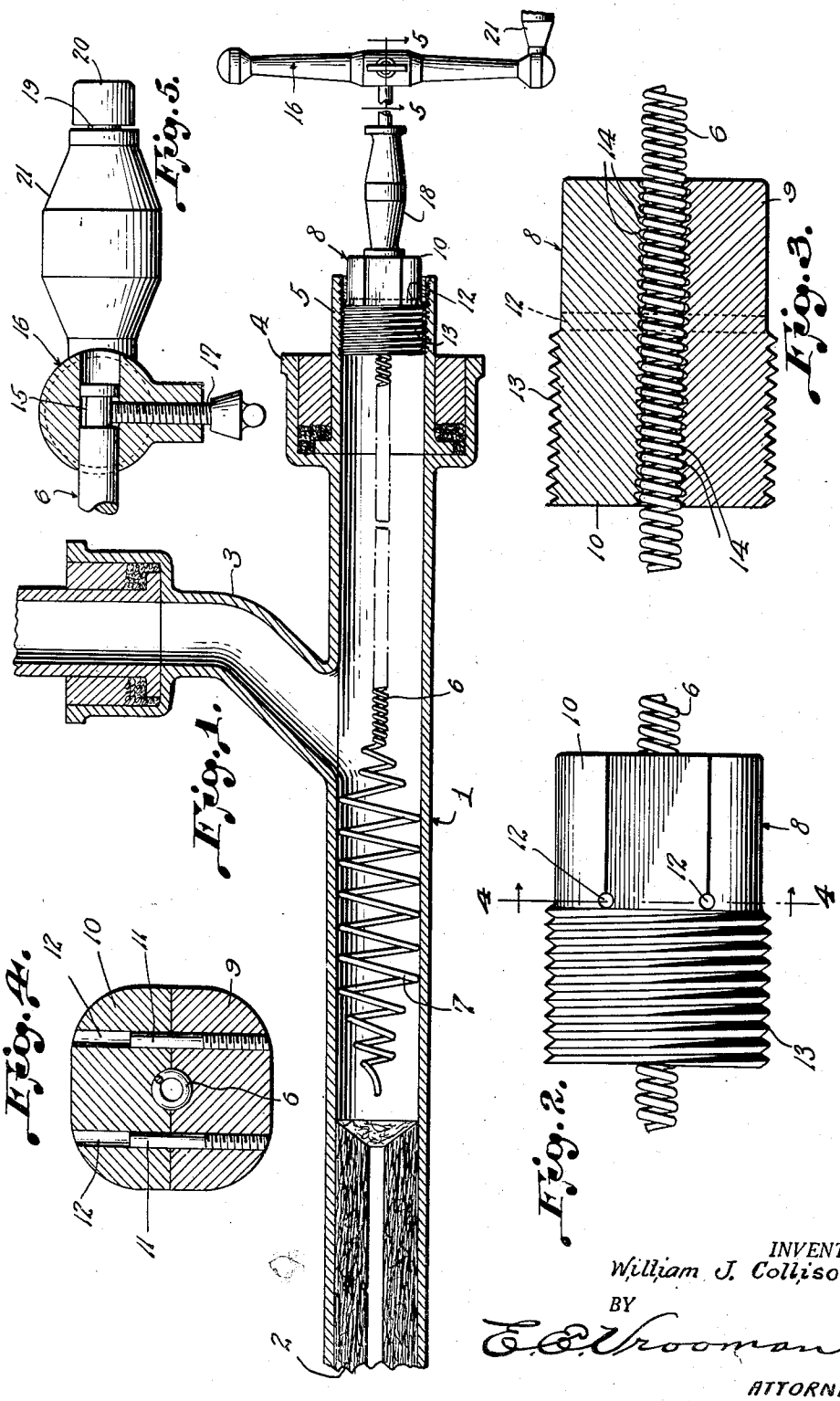


Fig. 1.

Fig. 4.

Fig. 2.

Fig. 3.

Fig. 5.

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TOOL FOR CLEANING WASTE PIPES

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1 Claim. (Cl. 15—104.3)

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This invention relates to a waste pipe cleaning-out tool.

An object of the invention is the construction of an efficient apparatus that can be easily operated by a single person for cleaning the drain pipe in a building.

Another object of the invention is the construction of a novel persuader that can be quickly applied to a snake, whereby the plumber can greatly increase the rotary movement of the snake for removing an obstruction in a drain pipe.

A still further object of the invention is the invention is the construction of an efficient apparatus wherein a novel persuader is employed in conjunction with a snake and an efficient handle for the removal of an obstruction in a drain pipe.

With the foregoing and other objects in view, this invention comprises certain novel constructions, combinations, and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claim.

In the drawings:

Figure 1 is an enlarged longitudinal sectional view of a drain pipe, showing in elevation an apparatus constructed in accordance with the present invention.

Figure 2 is a top plan view of the sectional persuader, while

Figure 3 is a longitudinal, vertical, sectional view of the same.

Figure 4 is a transverse sectional view, taken on line 4—4, Fig. 2, and looking in the direction of the arrows.

Figure 5 is an enlarged sectional view, taken on line 5—5, Fig. 1, and looking in the direction of the arrows.

Referring to the drawings, in which the preferred embodiment of this invention is illustrated, 1 designates a drain pipe and 2 is the obstruction therein. Integral with the drain pipe 1 is a waste pipe 3, as well as a cleanout hub 4. A plug holder 5 is in the cleanout hub 4.

A coiled snake 6 is provided which has on its inner end a spiral 7.

The persuader 8 comprises a primary section 9 (Fig. 4) and an auxiliary section 10. Screw pins 11 are threaded into the primary section 9. These pins have their inner ends smooth so that they will freely slide in the pin-receiving apertures 12. These pins 11 keep the two sections 9 and 10 in correct position for causing the screw threads 13 to register prior to threading the persuader 8 into the plug holder 5, Fig. 1. The surface of the outer end of the persuader 8 has flat portions on its peripheral surface, so as to afford an excellent grip for a monkey wrench, or the like, when the operator is screwing the persuader into the plug holder 5. The persuader is grooved at 14, Fig. 3, to receive the coiled snake 6. These grooves 14 act similar to screw thread sockets.

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On the outer end of the snake 6 these is formed an annular groove 15. A handle 16 is placed on the outer end of the snake 6 and a locking screw 17 is on the handle, whereby when screw 17 is screwed inwardly, the inner end of the screw will engage groove 15, and by tightening screw 17, the handle can be held rigidly on snake 6. Interposed between the persuader 8 and the handle 16 is a free grip 18, which revolves on the snake 6. The handle 16 is provided with a stub shaft 19 that has on its outer end a head 20. On the stub shaft 19 is a free rolling grip 21. To rotate the snake 6, the operator grasps the grip 18 with one hand and grip 21 with the other hand, and by rotating the handle 16, the snake can be either threaded into the drain pipe 1 or removed therefrom sufficiently to enable the plumber to easily remove the entire apparatus from its operating position.

In operation, the plumber or operator usually threads the snake into the drain pipe as far as they can easily do so, prior to applying the persuader 8 to the snake. Then when the movement becomes hard on the hands, the persuader 8, by reason of its sectional structure, can be clamped on the snake and then screwed into the plug holder 5. The handle structure can be also quickly attached to the snake. One operator can manipulate this apparatus and can secure excellent results.

By reason of the powerful rotary action that can be obtained, the snake will be forced past any obstruction in the drain pipe, thereby removing the obstruction and producing a clean drain pipe. The spiral 7 of the coiled snake 6 will efficiently pass around corners and angles and bad spots in the drain pipe.

To remove the apparatus from its assembled position, Fig. 1, the screw 17 can be loosened, whereupon the handle structure can be quickly removed from the snake 6, and then the persuader 8 is removed from the plug holder 5, whereupon the interlocking sections can be quickly separated and then the snake 6 can be easily pulled out of the drain pipe. By the sim-

plicity of all of the parts mentioned, this removing of the apparatus can be quickly accomplished.

While I have described the preferred embodiment of the invention and illustrated the same in the accompanying drawings, certain minor changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claim.

What I claim is:

As a new article of manufacture, a tool for cleaning waste pipes, comprising a cylindrical persuader of substantially the same thickness from end to end, said persuader being diametrically split throughout its length and comprising a primary section and an auxiliary section, said sections provided with flat contacting faces the greater part of their diameter, said auxiliary section provided with two pin-receiving apertures, said primary section provided with two threaded apertures registering with said pin-receiving apertures of said auxiliary section, pins slidably mounted in said pin-receiving apertures and threaded at one of their outer ends in said threaded apertures, said persuader being externally screw-threaded one-half of its length, said persuader beyond its screw threads and at one end having flat portions on its peripheral surface for receiving a monkey wrench, said sections of said persuader being helically grooved internally throughout their lengths to act similar to screw thread sockets, a coiled snake threaded through said persuader and in engagement with said sockets, and a handle secured to the outer end of said snake.

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