

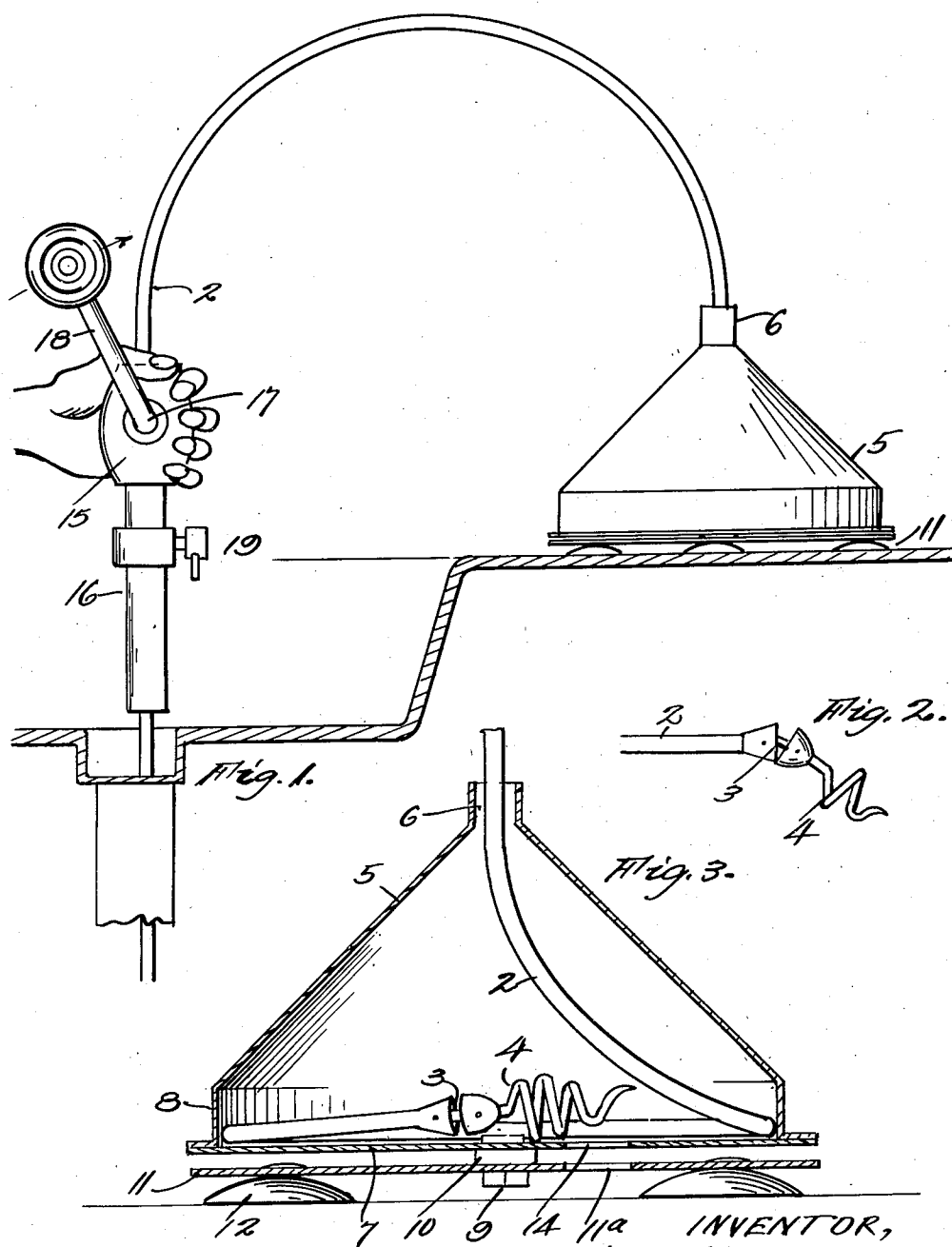
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PLUMBER'S SNAKE HOUSING SHELL

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PLUMBER'S SNAKE HOUSING SHELL

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2 Claims. (Cl. 242-54)

This invention is a pipe cleaning snake and snake housing shell set or unit, including means to rotate the snake as it may be advanced into and from a given pipe, for instance from a sink, or a bath tub, or a lavatory.

Flexible, coiled-spring-wire snakes are generally used for pipe cleaning and the snake concerned in the instant invention is provided with a loose jointed head or leader pilot of a much larger diameter than the diameter of the flexible snake. Such a loose headed snake creeps forward in a bent pipe line with much facility at the vertical parts of bends because the loose head tends to drop at the end of the snake and follow the line down rather than unfortunately turn upward with injurious results to the pipe system. These snakes are run with either end forward as desired, that is a small or headless end or the head end may be entered. In either case it is desirable that the whole length of the snake be coiled in a snake housing shell of rotary type and the snake drawn from the house just as its length may be needed in a given job. This invention has for an object to provide, in such a snake set, a housing shell of such construction and design that the snake will be guided out of the housing shell through a mouth of a size slightly larger than the diameter of the snake, and there is made provision for the entry of the head of the snake which is of such size that it cannot be passed in the said mouth of the housing.

Further, an object is to provide a snake set having in combination, a drop-head type snake, a rotary housing shell for the coils of the snake, and a means applicable to the snake to form a guide and hand-hold for control of the entering direction of the snake and for positively rotating the snake, and through the latter, the spinning of the housing shell.

The invention consists in certain advancements in this art as set forth in the ensuing disclosure and having, with the above, additional objects and advantages as hereinafter developed, and whose construction, combinations, and sub-combinations, and details of means, and the manner of operation will be made manifest in the following description of the herewith illustrative apparatus; it being understood that modifications, variations and adaptations may be resorted to within the spirit, scope and principle of the invention as it is more particularly claimed hereinbelow.

Figure 1 is a side elevation of the snake set as in use.

Figure 2 is a side elevation of the head end of a "drop" head snake tool.

Figure 3 is a vertical, axial section of the housing shell, with the drop head end of the snake coiled in the housing shell.

A coil-spring wire snake 2 is shown as having a joint 3 at one end to which is attached the drop head 4. When such a snake is entered into or passes along a horizontal part of a pipe the head gravitates downward and will follow a vertical or inclined part of the pipe automatically, instead of turning up, if possible.

The instant snake house includes an imperforate conical hood 5 having a mouth 6 large enough to easily receive or pass out the snake or its headless end, but too small to allow the large headed end of the snake to be put in through the mouth.

The housing shell has a fixedly attached plate bottom 7 and is free of any interior obstruction which might engage the snake which tends to automatically expand into a position of rest laterally against the wall of the shell, which, if desired, may have a vertical wall 8 toward the bottom 7. Easy rotation of the housing shell is secured by provision of an axial bolt 9 passing through a ball-bearing 10 supported on a platform plate 11; the bottom 7 turning on the bearing 10.

The base plate 11 is of ample diameter to afford lateral stability to the housing shell against over-turning effort of the snake 2 as it is drawn from the housing shell and the plate 11 is provided with vacuum cups 12, or other suitable means to hold the housing shell steady in a given place of rest.

Since it is sometimes desired to coil the snake with its head 4 in the housing shell so that the small end of the snake may be run into small bore pipe or tubes the bottom 7 of the housing shell 5 is provided with a hole 14 of a size such as to receive the head 4 after the small end has been passed through the hole 14 and out of the mouth 6. As soon as a coil is set up in the length of the snake, after its head has been pulled in the opening 14, the head of the snake will be thrust laterally and will lie along the margin of the bottom plate 7 and near the wall part 8.

The set includes in its combination a hand-grip body or gear box 15 having an elongate guide tube 16 through which the snake 2 can be passed endwise, small end first. Extending perpendicularly from the grip part 15 is the shaft 17 of a handle or crank 18. A suitable snake clamp 19 on the tube 16 will set tight on the

snake and when the crank is rotated it acts, through gear connection with the tube, to turn the tube and the gripped or clamped snake 2. When the snake is rotated its frictional contact with the interior face of the housing shell causes the latter to turn.

Whatever the nature of the platform part 11 it will be provided with an aperture 11a to pass the snake head 4 to or from the house.

It will be seen that the imperforate shell prevents lateral, centrifugal throw-off of accretions that may be clinging to the coiled snake in the shell and which throw-off material is objectionable because of possible soiling of room walls or floor.

What is claimed is:

1. A pipe snake set having, in combination, a bendable, resilient tool-rotating snake having a bulbous head, a housing shell having a top dome part having a central mouth for issue of the snake and whose lip diameter is less than and is engageable with its head to stop the snake withdrawal, a bottom fixedly attached to the shell, a stable horizontal platform, and coaxial

means rotatively connecting the platform and said bottom; said bottom and platform having apertures eccentric to said connection and registerable to permit pushing the resilient snake by motion on its axis into the shell chamber for its normal expansion into coils on said bottom and to engage the shell wall, and the apertures being large enough to admit entry of the head but too small to admit of loops or coils of the snake made up before application to the shell.

2. A plumber's headed-snake housing shell having a top member with a central mouth for issue of the snake and of a lip diameter for holding the head of the snake from withdrawal, a fixed bottom on the shell, a stable, horizontal platform coaxially and rotatively connected to said bottom; said bottom and the platform having registerable apertures eccentric of their axis and large enough to admit the snake head but not pre-formed loops of the snake; the side wall of the shell being imperforate to prevent throw-off of moisture from the snake as the shell may rotate on the platform.

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