March 21, 1950 W. BURTON 2,501,311

ROTARY REEL FOR DRIVING AND STORING FLEXIBLE PIPE CLEANING ELEMENTS

Filed Jan. 11, 1945

Fig. 1.

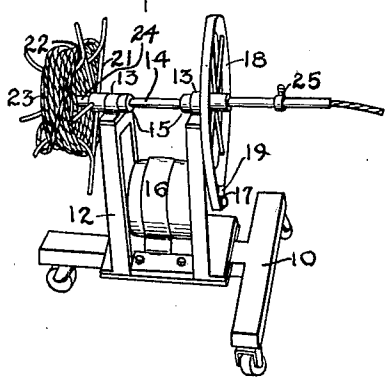


Fig. 2.

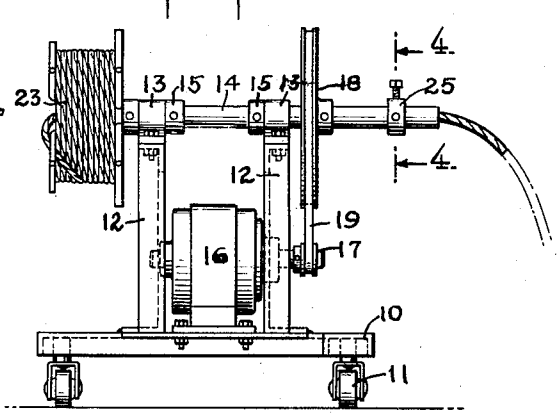


Fig. 3.

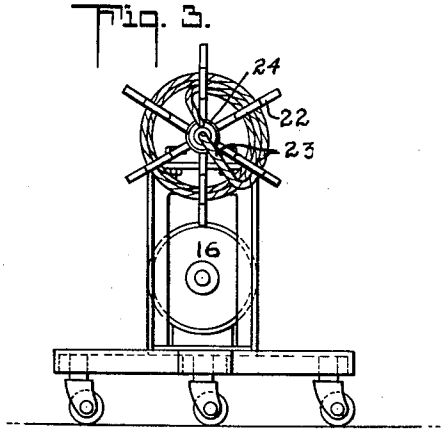


Fig. 4.

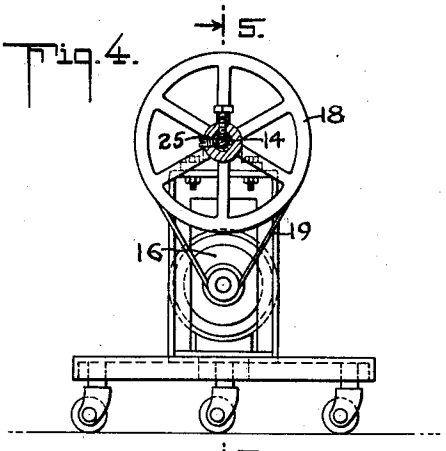
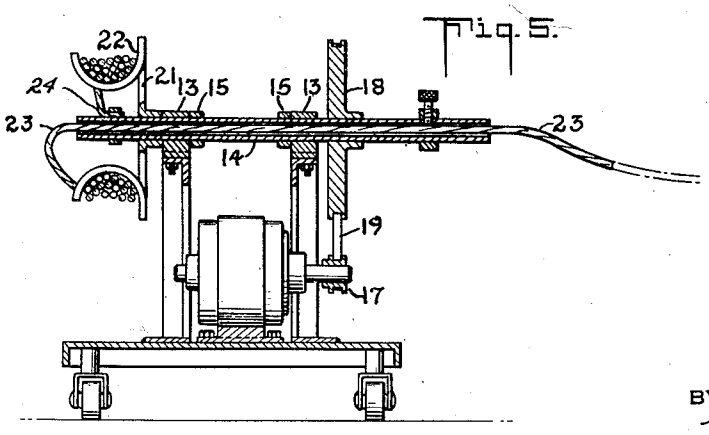


Fig. 5.



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2,501,311

ROTARY REEL FOR DRIVING AND STORING FLEXIBLE PIPE-CLEANING ELEMENTS

William Burton, Brooklyn, N. Y.

Application January 11, 1945, Serial No. 572,373

1 Claim. (Cl. 15—104.3)

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This invention relates to a portable machine for cleaning out drains. It is an object of this invention to provide a machine of the character described which will be inexpensive in construction so that it will be available even to small shops and workmen who may have to operate alone, and which will be readily transportable so that it may be easily carried to any place where it may be needed for use.

The machine consists primarily of a drive motor and a flexible cable or snake connected to be driven by the motor, and to be fed into a drain that may have been clogged by solidified fats or by paper or the like.

I am aware that devices of this general character have been proposed, but they have been intended primarily for heavy work, and have generally been provided with a cutting tool at the forward end to cut out roots that have grown into buried drain pipes. The machines have been heavy and complicated and for these reasons have not proved available for a wide variety of lighter work.

The present machine is intended to remove only lighter obstructions that do not require cutting. Ordinarily if the drain from a toilet or a sink occurs it creates an emergency which requires the immediate services of a plumber equipped only with such tools as he can handle efficiently by himself, without waiting for an assistant.

The invention accordingly comprises the machine a specific embodiment of which is hereinafter described and illustrated in the accompanying drawings in which Fig. 1 is a perspective view of the machine. Fig. 2 is a front elevation thereof. Fig. 3 is an elevation taken from the left as seen in Fig. 2. Fig. 4 is an end elevation from the right as seen in Fig. 2 with parts in section on the line 4—4. Fig. 5 is a section on the line 5—5 of Fig. 4.

In the drawings, the numeral 10 designates a base shown as T shape having wheels 11 on each leg of the T. Rising from the base are a pair of uprights 12 carrying in their upper ends, journals 13 for a hollow shaft 14. This shaft is held against end movement by collars 15 fitting against the sides of the journals. Mounted on the base 10, between the uprights 12 is a motor 16 having upon its shaft a pulley 17 driving a larger pulley 18 on the hollow shaft 14, so as to drive the shaft 14 from the motor at a reduced speed, through the medium of a belt 19.

Mounted on the other end of hollow shaft 14, from the pulley 18, is a reel comprising a plurality of radially extending arms, each of which, as shown, comprises an outwardly extending portion 21 carrying an inwardly curved portion 22 the outer end of which is bent in again where it is supported by being attached to the hollow shaft 14. With this construction the curved sections of the arms comprise between them, a concave

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faced reel to receive the flexible cable or snake 23, which may be attached, at its inner end, to the reel at 24. The outer end of the snake passes through the hollow shaft and extends out as far as may be necessary to enter the drain pipe and remove the obstruction. A clamp 25 may be placed upon the hollow shaft for use whenever it may be desirable to clamp the snake in position.

By reason of the construction of the reel, and by reason of the comparatively slow motion of the reel and snake, sections of the snake may be removed from the reel during the operation of the device and thrust through the hollow shaft into the drain pipe. But as each section is so taken off the reel, the act of thrusting the slack through the hollow shaft brings the portion still on the reel into engagement with the next arm of the reel, and thus the extruding portion of the snake continues to be driven by the motor. The slight relative turning of the snake and the hollow shaft comprising one revolution for each complete coil taken off of the reel, readily adjusts itself without attention during the operation. Similarly, when the operation is over and the snake is again coiled this operation adjusts the twist by turning the snake as it is drawn through the hollow shaft, without special attention being required.

Having thus described my invention, what I desire to secure by Letters Patent is:

A device of the character described comprising a base having a journal, a hollow shaft rotatable in said journal, a reel on one end of said shaft exterior to said journal and having an open outer face, said reel comprising a plurality of radial arms each having one end attached to said shaft and having at its other end an inwardly curved portion lying in an outwardly concave surface of revolution, a snake wound upon the exterior of said reel, having its end extending between said arms and through said reel and shaft whereby said snake may be successively released from each of said arms and the corresponding length thereof may be shoved through said hollow shaft, and whereby said snake is continuously driven by rotation of said reel.

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