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REVOLVING WASTE PIPE OPENING MACHINE

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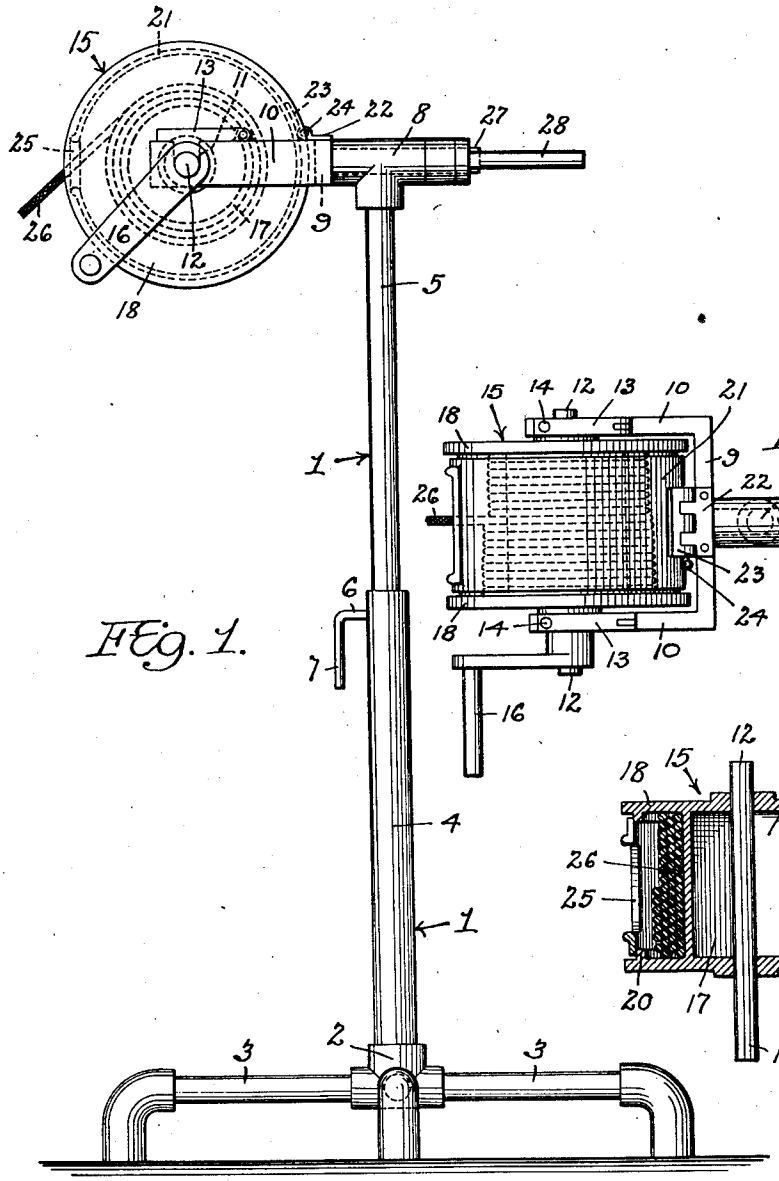


Fig. 1.

Fig. 2.

Fig. 3.

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REVOLVING WASTE PIPE OPENING MACHINE

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This invention relates to a novel machine for use in opening drain pipes which have become clogged with waste matter, and the invention has as its primary object to provide a machine by which this task may be performed without incurring the disadvantages which attend the carrying out of the old method, namely the use of from twenty-five to thirty feet of plumber's snake or cable which it was necessary to strew over the surface of the floor, thereby cluttering up the entire room in which the drain is located and then forcing the cable through the drain pipe filled with water to carry away the débris or other obstructions, and after dislodging the obstruction, the cable had to be withdrawn and again strewn over the floor surface until it could be rewound or otherwise gathered up, with the consequence that the floor surface would become littered with dirt and water from the cable.

More particularly the invention has as its object to provide a machine which may be conveniently set up upon the floor surface at a point substantially over the drain to be opened and which machine embodies a drum rotatably mounted in a cylindrical housing or casing, from which drum the cable may be paid out in any length required, to be fitted into the drain until the obstruction is reached and dislodged, a reverse rotation of the drum serving to rewind the cable while the cable is maintained taut during the rewinding operation, thus overcoming the disadvantages of the old method.

Another object of the invention is to provide a machine for the purpose stated in which the drum and its casing may be adjusted to any desired elevation.

Another object of the invention is to provide a machine of this class so constructed and in which the drum, and its casing, are so supported that if it is found that the crank handle by which the drum is rotated cannot be conveniently employed, the drum casing and the support therefor may be readily reversed and rotated by another crank handle provided for that purpose.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view in elevation of the machine embodying the invention.

Figure 2 is a top plan view thereof.

Figure 3 is a horizontal sectional view through the drum and casing.

The support for the drum and the operating means therefor comprises an upright or standard indicated in general by the numeral 1, which is mounted at one end in the center coupling 2 of a tripod base 3, the standard including a lower tubular section 4 and an upper section 5 which is telescopically fitted into the lower section 4 so that the section 5 may be vertically adjusted, the section being held in its positions of adjustment through the medium of a set screw 6 preferably provided with an angularly extending handle 7.

Mounted upon the upper end of the upper section 5 of the standard is a T-union 8 and at one end of the union there is mounted, by means to be presently described a U-shaped frame comprising a cross member 9 and side members 10, and the side members are each recessed at one edge, as indicated by the numeral 11, and which edge is normally the upper edge of each side member, and the crank shaft 12 is rotatably mounted at its ends in the recesses and retained therein by hinged bearing members 13 which may be removably held in closed position by any means found desirable, as for example by screws 14. A winding drum, indicated in general by the numeral 15 is fixed upon the shaft for rotation therewith, and a crank handle 16 is likewise fixed upon one end of the shaft and constitutes means whereby the shaft and drum may be rotated. The drum comprises a cylindrical body 17 and heads 18 which project at their peripheral portions beyond the body and are provided upon

their inner sides with inwardly projecting annular flanges 20 which engage in the opposite sides of a cylindrical casing 21, the flanges being rotatable within the casing and the casing being held against rotation, normally, by means of a pair of hinge members 22 and 23 which are mounted respectively upon the cross piece 9 and the outer side of the casing, a pintle pin 24 being fitted through the lugs of the hinge members 22 and 23 and the drum being in this manner held stationary with respect to the frame comprising the members 9 and 10. The drum is provided at its side opposite the side at which the member 9 is located with an opening 25 through which the cable indicated by the numeral 26 may be led.

A shaft 27 is rotatably mounted in the upper member of the T-coupling 8 and a crank handle 28 is fixed upon the outer end of this shaft, the other end of the shaft being connected or united to the cross piece 9 of the frame.

It will now be understood that the cable 26 may be paid out from the drum 15 by merely pulling the cable through the opening 25 in the casing 21 and the cable passed down through the drain to be cleaned or opened until the end of the cable engages the obstruction in the drain whereupon the cable is repeatedly elevated and moved downwardly until the obstruction is dislodged and it will be evident at this point that due to the flexible nature of the cable it will be adapted to pass through various formations of the couplings and elbows in the drain.

After the obstruction has been cleared from the drain, the drum may be reversely rotated through the medium of the crank handle 16 and the cable in this manner withdrawn from the drain and rewound upon the drum. In the event it is found that the crank handle cannot be conveniently operated from the side of the machine at which it is located, it is only necessary that the crank handle 28 be rotated through one half a turn in order to invert the frame comprising the members 9 and 10, and the drum 15 and its casing 21 so that the crank handle 16 will be located at the other side of the standard.

What I claim is:—

A machine of the class described, comprising a base member, a standard comprising a fixed lower section and upper section telescopically fitting the lower section, means carried by one of said sections and coacting with the other section to hold the last mentioned section in different positions of elevation, a T-coupling mounted at the upper end of the second mentioned section of the upright, a shaft rotatably mounted in the T-coupling, a U-shaped frame mounted upon the coupling, a shaft journalled for rotation in the side members of the frame, a drum fixed upon the shaft, a casing surrounding the drum, the drum having heads provided with flanges of annular form rotatably fitting in the opposite sides of the casing, the casing having an opening for the passage therethrough of a cable to be wound upon the drum, and coacting means upon the casing and the said frame for holding the casing against rotation with the drum.

In testimony whereof I affix my signature.

AMEL REBER.