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H. LOWRY.
PIPE CLEANER.
APPLICATION FILED JULY 7, 1910.

Patented Dec. 13, 1910.

Fig. 1.

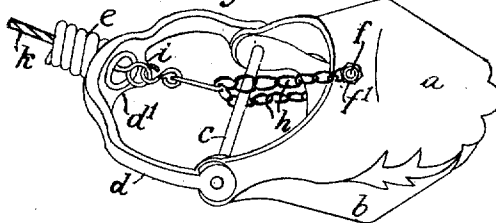


Fig. 2.

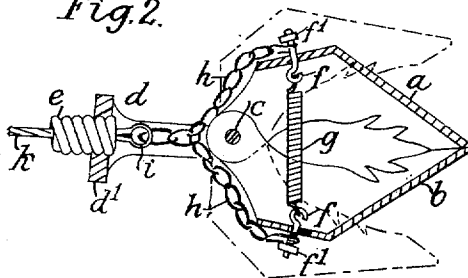


Fig. 3.

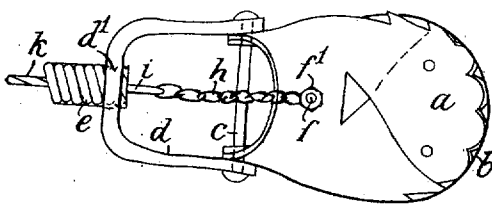
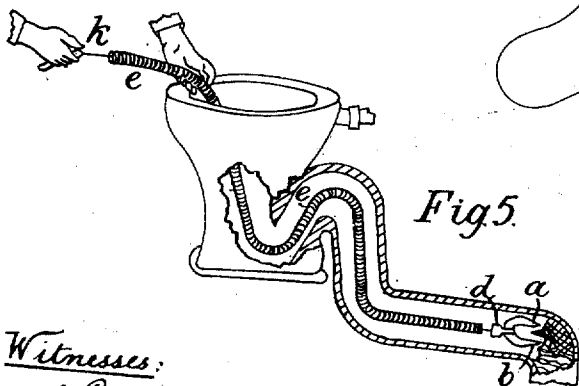
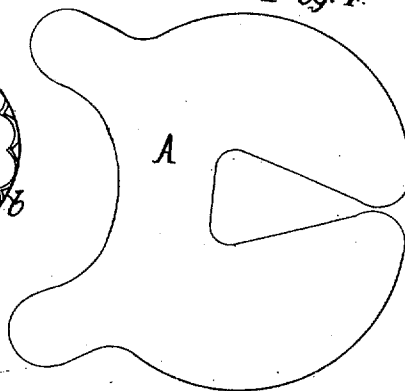


Fig. 4.



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HENRY LOWRY, OF BELFAST, IRELAND.

PIPE-CLEANER.

978,316.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY LOWRY, of H. Lowry Limited, a subject of the King of England, residing in Belfast, Ireland, have
5 invented a new and useful Pipe-Cleaner, of which the following is a specification.

The object of the invention is to provide a pipe cleaner, that is to say, an appliance for effectively removing obstructions from
10 sewage pipes, gulley traps, gutter pipes and the like, by means of pivoted toothed jaws connected with a carrier removably mounted on a flexible tube provided with means for
15 opening said jaws which are constantly closed by a spring and so enable obstructions to be withdrawn from pipes by pulling the flexible tube and without having to lock or keep said jaws forcibly closed while pulling
same back.

20 The annexed drawings show an embodiment of the invention.

Figure 1 is a perspective view of the head of the appliance the greater portion of the flexible tube being broken away; Fig. 2, is
25 a vertical section of the head; Fig. 3, is a plan of same; Fig. 4, is a blank of a jaw; and Fig. 5, is a side-elevation, partly in section, showing the manner of using the appliance.

30 The jaws *a* and *b* are formed with suitable teeth and are hinged on a cross-pin *c* fast in a bow-shaped carrier *d* which has a central perforated boss *d*¹ to which is secured a flexible tube *e*. Preferably the perforation
35 in the boss *d*¹ may be screw-threaded in such a manner as to screw onto the end of the flexible tube *e* which for this purpose can be made of closely wound wire coil. Each jaw
40 is fitted with a screw-threaded hook *f* which holds the end of a spring *g* adapted to normally keep the jaws closed. To the screw-threaded stem of each hook *f* externally of
the jaws there is secured a chain *h* by means of a nut *f*¹ and said chain is connected with
45 its middle link to an eye *i* secured to a wire or thin twisted cable *k*. The screw-threaded hooks allow of adjusting the pull of the springs *g*.

The jaws *a*, *b* may be made in any suitable
50 manner and of any appropriate material.

For example, a convenient manner of construction is shown in Fig. 3, by cutting a blank from steel plate and then bending the rear portion into semi-tubular form while the front portion is overlapped so as to pro-
55 duce a tapering and comparatively flat mouth. Or the jaws may be stamped or cast in a suitable mold.

Obstructions can by this apparatus be removed from pipes, etc., without breaking or
60 otherwise damaging same and the flexible tube can, if desired, also be utilized at same time, as a suction or siphon pipe for ejecting liquid or other fluid matter from blocked
65 pipes, etc., thereby allowing the person operating the instrument, to carry out and complete the cleaning operation without the unpleasant necessity of doing so, in or through the
aforementioned liquid. The apparatus
70 can be used in pipes, etc., of almost any diameter and extended up same to any required distance.

Obviously, it is easier to pull merely at the flexible tube *e* for withdrawing the
75 apparatus while the jaws keep automatically closed, than having to manipulate at the same time some additional means for keeping the jaws forcibly closed simultaneous with the pulling out of the apparatus, as is
80 required with some existing apparatus.

I claim:

1. An appliance for use in drain-pipes, comprising pivoted spring-controlled jaws in combination with a bow-shaped carrier, a
85 screw-threaded central boss on the latter, a flexible pipe screwed in said boss, and means for opening said jaws, as specified.

2. An appliance for use in drain pipes, comprising in combination with each other, a carrier, a flexible tube connected to it, piv-
90 oted jaws on said carrier, a spring crosswise within the jaws, hooks holding the ends of said spring, an external chain fixed to said hooks, and a pulling cable attached to said chain and leading through the flexible tube,
95 as specified.

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