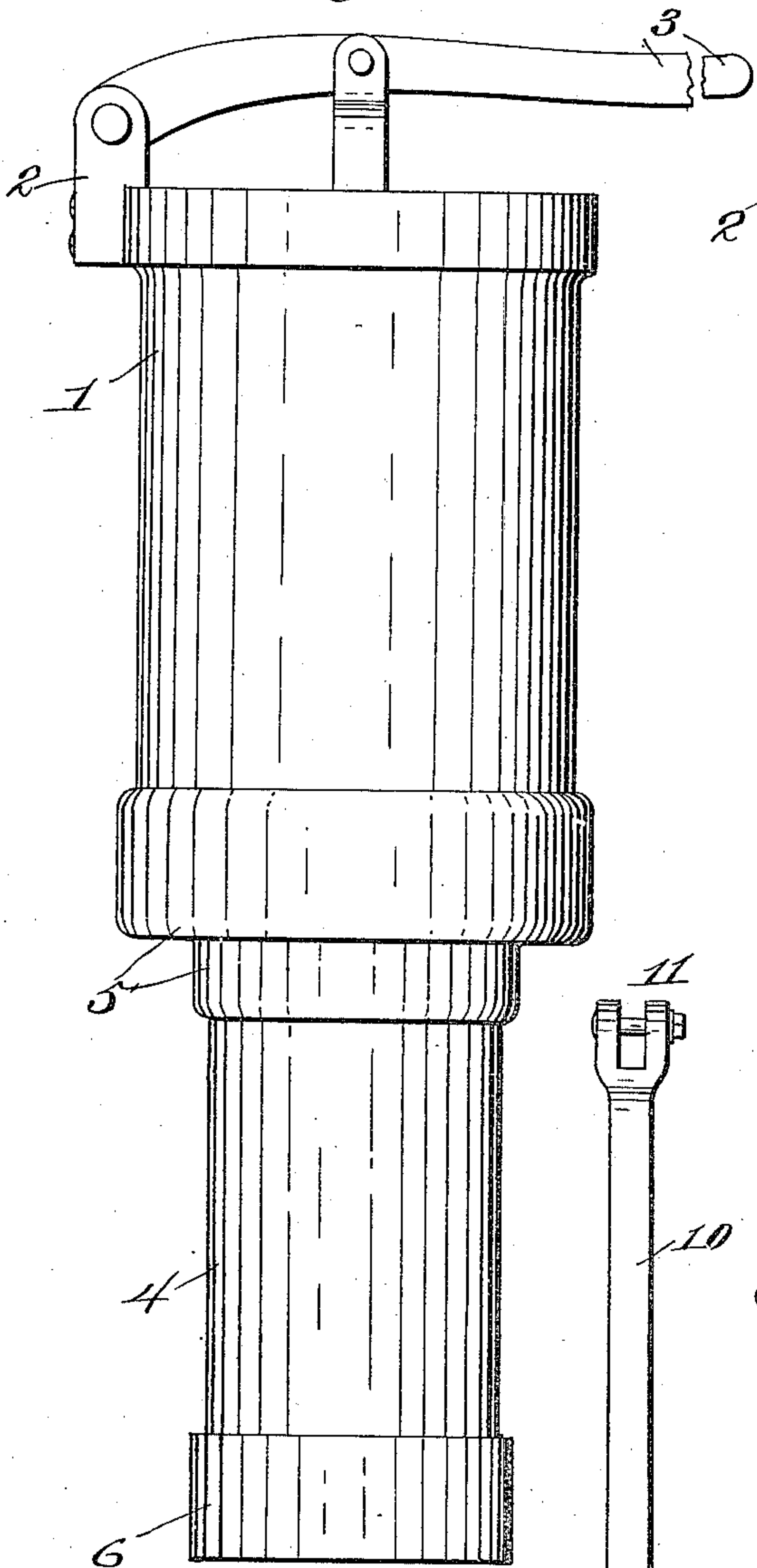


L. O. LUNDGREN.  
 SUCTION PUMP FOR CLEANING DRAIN PIPES.  
 APPLICATION FILED JUNE 2, 1909.

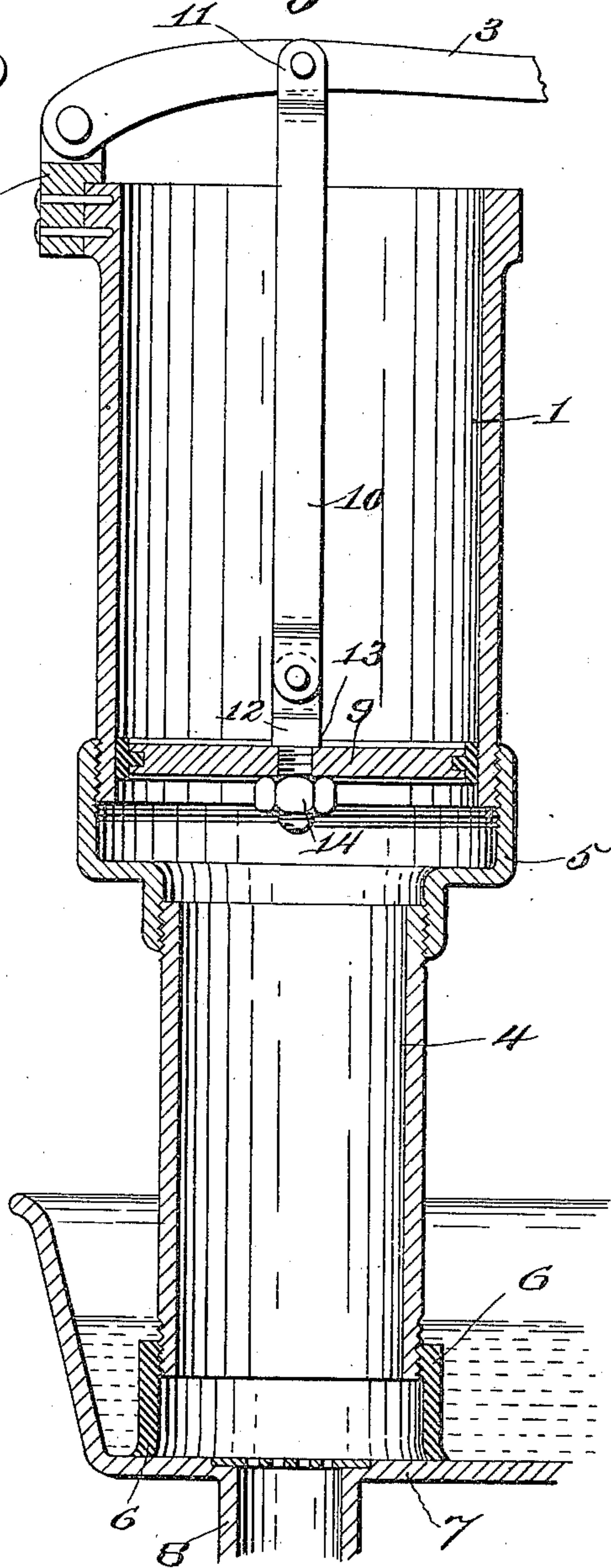
948,590.

Patented Feb. 8, 1910.

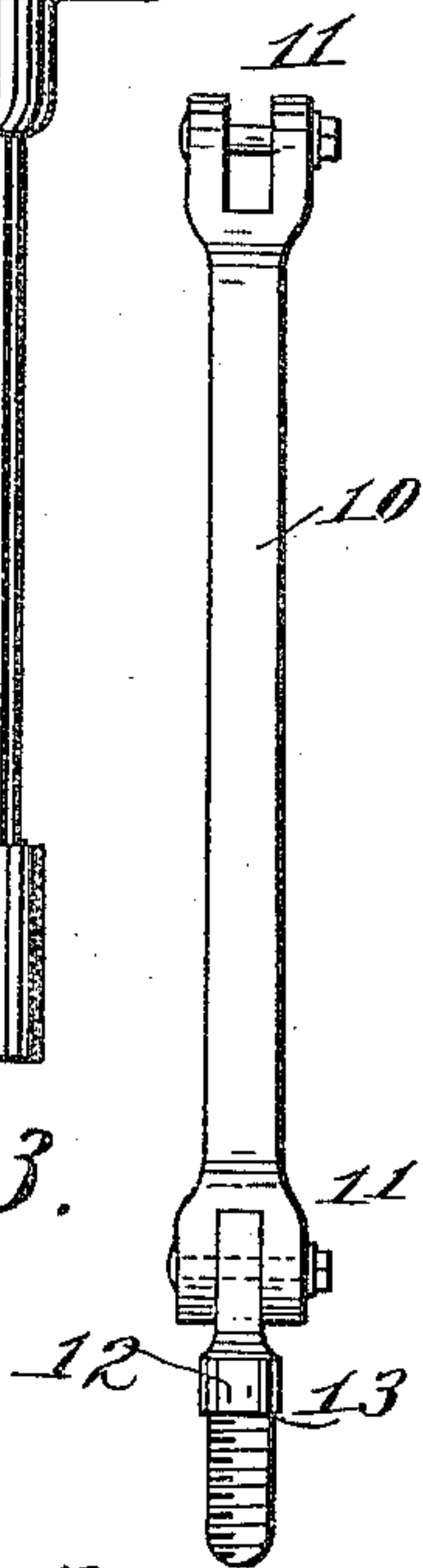
*Fig. 1.*



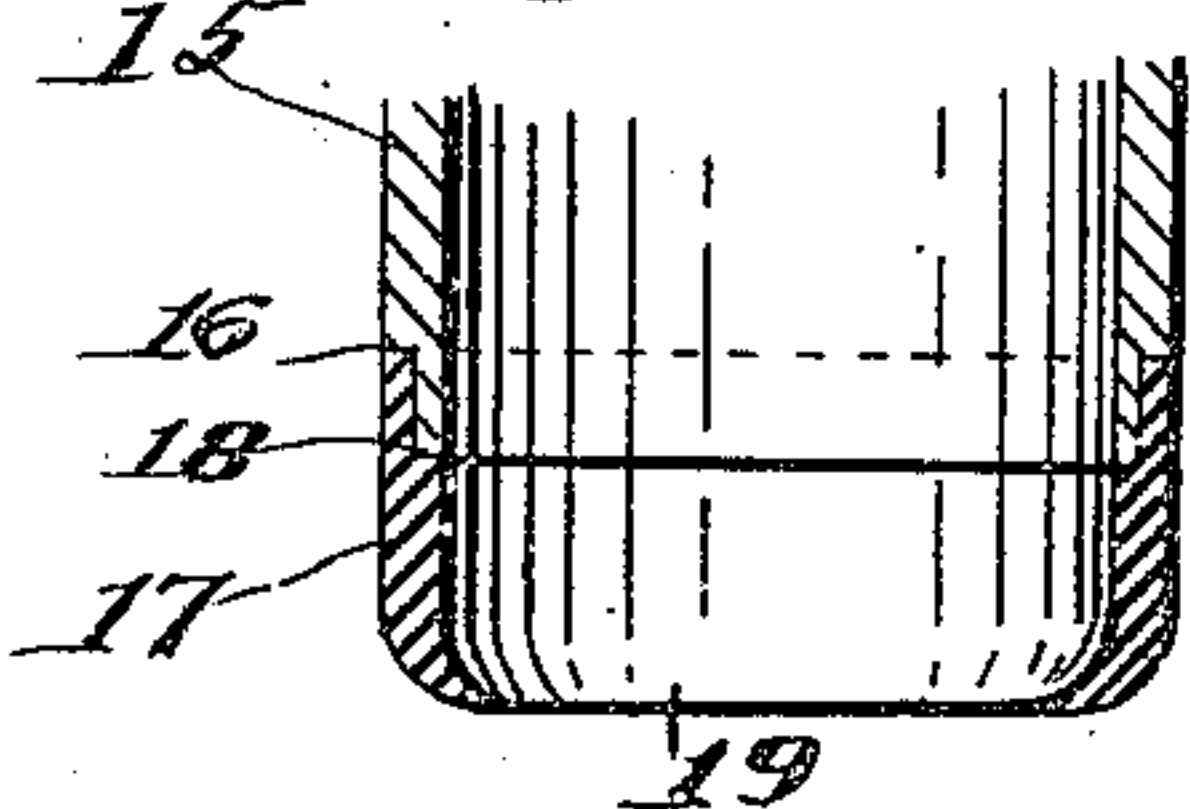
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

C. J. Bell

Wm. E. Volk Jr.

Inventor  
 Lars O. Lundgren

By

Jacob Whitman & Co.

Attorneys.



# UNITED STATES PATENT OFFICE.

LARS O. LUNDGREN, OF LAKEPORT, CALIFORNIA.

## SUCTION-PUMP FOR CLEANING DRAIN-PIPES.

948,590.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed June 2, 1909. Serial No. 499,662.

*To all whom it may concern:*

Be it known that I, LARS O. LUNDGREN, a citizen of the United States, residing at Lakeport, in the county of Lake and State of California, have invented certain new and useful Improvements in Suction-Pumps for Cleaning Drain-Pipes, of which the following is a specification.

This invention relates to drain pipe cleaners, and pertains especially to a suction pump adapted for operation in sinks, basins and similar places for unstopping drain pipes.

The object of the invention is to provide a suction pump of novel and peculiar construction having special features making it applicable to sinks, basins, hoppers and the like for unstopping and cleaning drain or discharge pipes.

A further object of the invention is to provide a suction pump of such novel and peculiar construction and arrangement of parts that they may be assembled in a simple inexpensive manner, and be expeditiously operated in sinks, basins, hoppers and the like for unstopping, cleaning or washing out drain or soil pipes.

Other objects, advantages and improved results will be found in the practical application of the invention.

In the accompanying drawings forming part of this application: Figure 1 is a side elevation. Fig. 2 is a central vertical sectional view showing the pump applied to a sink. Fig. 3 is a detail elevation of the piston-rod and its piston coupling. Fig. 4 is section of a modified form of rubber ring.

The same reference numerals denote the same parts throughout the several views of the drawings.

The top of the pump cylinder 1, has a bracket 2 bolted thereto in which a suitable hand lever 3 is fulcrumed. A pipe 4 is connected to the bottom of the cylinder by a screw coupling 5, and the top of the cylinder is open. The lower end of the pipe 4 has screwed thereto a flexible ring or rubber pipe section 6, depending therefrom and adapted to fit over a discharge or vent opening in the bottom 7 of a sink, basin, or hopper, having a drain pipe 8 leading therefrom. A piston 9 is operated in the cylinder by the hand lever, and this lever is connected with the piston by a rod 10 having forked ends 11, and a coupling 12. One of the forked ends

11 is pivoted to the hand lever and the other to the coupling 12, which extends through the piston and is provided with a shoulder 13, and nut 14 by means of which the coupling is secured to the piston.

It will be understood that a longer or shorter pipe may be substituted for the pipe 4, according to the place or condition in which the pump is to be operated, and that the parts may be separated and assembled expeditiously.

In operation, the pump is placed in position with the rubber section 6 pressed down over the vent or drain pipe exit so as to form a vacuum in the pipe 4, then the sink or basin is partly filled with water, then by working the hand lever the piston is operated to create a suction in the drain or soil pipe 8, which loosens the soil or obstruction in the pipe 8, whence it is discharged through this pipe with such matter.

Referring to the modification shown in Fig. 4 of the drawings, the pipe 15 has a shoulder 16, and the rubber ring 17 has a shoulder 18, so that the ring fits under the shoulder 16 and the end of the pipe 15 fits the shoulder 18 making a flush joint therebetween. The depending portion of the ring 17 is reduced in thickness, and is intended to form a thin flexible bearing 19 having an opening of less diameter than the diameter of the pipe and the ring. This leaf-like or flexible bearing is adapted to fit itself, under pneumatic pressure, to the bottom of a sink or basin.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

In a suction pump for drain pipes, the combination, with a pump cylinder, a piston, a piston-rod having each end forked, a coupling having a shoulder fitting the piston and pivotally connecting the piston-rod with the piston, and a screw-coupling forming an abutment for the piston, of a rubber pipe section having a free end, and a pipe for connecting the screw-coupling with the rubber pipe.

In testimony whereof I affix my signature in presence of two witnesses.

LARS O. LUNDGREN.

Witnesses:

J. H. JOHNSON,  
HENRY SLOTTER.