

(No Model.)

W. C. DILLMAN.

INSTRUMENT FOR REMOVING OBSTRUCTIONS FROM PIPES.

No. 558,549.

Patented Apr. 21, 1896.

Fig. 1.

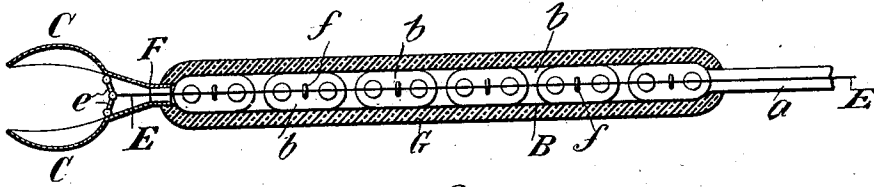


Fig. 2.

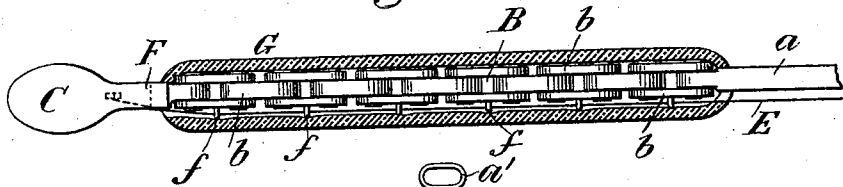


Fig. 3.

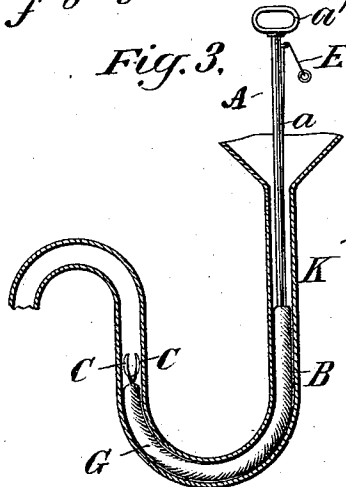
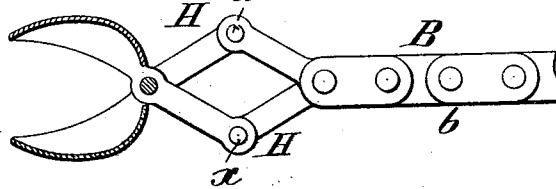


Fig. 4.



Witnesses:-

O. H. Naynor

Wm. D. Barry

Inventor:-

William C. Dillman

by his attorney

Philip Hathaway

UNITED STATES PATENT OFFICE.

WILLIAM C. DILLMAN, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF
TO DAVID S. BEASLEY, OF SAME PLACE.

INSTRUMENT FOR REMOVING OBSTRUCTIONS FROM PIPES.

SPECIFICATION forming part of Letters Patent No. 558,549, dated April 21, 1896.

Application filed January 3, 1895. Renewed March 11, 1896. Serial No. 582,825. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. DILLMAN, a citizen of the United States, and a resident of the city of Brooklyn, in the State of New York, have invented new and useful Improvements in Instruments for Removing Obstructions from Pipes, of which the following is a specification.

The object of my invention is to provide an improved instrument for removing obstructions from pipes, and is especially designed for use in cases where obstructions occur in pipes that are curved or bent or have elbows—as, for instance, in clearing the soil-pipe of a water-closet or the waste-pipe of a sink.

I have in the accompanying specification and drawings illustrated my invention as applied to removing all obstructions in the soil-pipe of an ordinary water-closet, but it is obvious that it can be applied in a variety of other cases when obstructions have to be removed from pipes.

In the accompanying drawings, Figure 1 is a sectional elevation. Fig. 2 is a plan view, partly in section. Fig. 3 is a section of a water-closet soil-pipe, showing my instrument inserted. Fig. 4 is an elevation showing a modified form of one of the features of my invention, as hereinafter described.

In the above drawings, A is a handle of any suitable length, consisting of a rigid rod *a* and a suitable device *a'* for grasping same and connected at its lower extremity with a sectional stem E.

B is a stem formed of separate sections *b b*, made preferably of thin stamped iron plates, linked and pivoted together, as shown, so as to allow free lateral movement of the sections of which it is composed.

C C are a pair of curved and pointed jaws attached to the end of the sectional stem B and having a diameter when extended slightly less than the diameter of the pipe to be operated on. The shape and size of these jaws may be varied to suit the various obstructions required to be removed, and for this purpose I secure them to the stem B by any suitable detachable device, so that jaws of varying size and shape can be used on the same stem.

In some cases I form these jaws with barbs on their extremities, so as to engage more firmly with obstructions consisting of rags or other fibrous substances.

e is a toggle-joint connected with and operating the jaws *c c* and arranged to close same when the chain or string attached to such toggle-joint is tightened.

E is a chain or string connected with and operating the toggle-joint *e* and passing through the rings or screw-eyes *f f*, attached to the stem B.

F is a spring by which the jaws *c c* are kept normally expanded.

G is a flexible sheath, made preferably of vulcanized-rubber tubing, stretched over and inclosing the stem B for facilitating the passage of such stem through a curved pipe K by controlling and regulating the lateral movements of the sections *b b* and preventing them jamming against the curves or elbows of such pipe.

In Fig. 4 I show a modification of my instrument, in which in some cases I dispense with the eyes *f f* and the chain E and substitute a different mode of closing the jaws C C. In this figure, H is a frame of the ordinary lazy-tongs type composed of strips or bars pivoted together at the points *c*, two of such bars being affixed to the ends of the jaws C C in the ordinary way and two other bars being pivoted to the stem B by a detachable pivot or other removable fastening.

In applying my invention the stem B is pushed down the pipe K by the handle A, the jaws C C being kept extended by the spring F till the obstruction is reached, when the jaws C C are closed on such obstruction by tightening the chain E, which operates the toggle-joint, or by the action of the lazy-tongs H, and the instrument is withdrawn.

The jaws C C may be made of various shapes to suit different kinds of obstructions; but in every case the operation of the parts of my instrument is to cause such jaws to remain wide open when the instrument is being pushed down the pipe and to close such jaws tightly when the instrument is being withdrawn.

Having thus described the nature of my invention, what I desire to secure by Letters Patent is—

5 In an instrument for removing obstructions from pipes, the combination of the flexible stem B provided with a rigid handle A and with a flexible sheath G covering such stem, the movable jaws C. C. connected with the stem B by the toggle-joint *c*. and means for
10 operating the jaws C. C., such means consisting of the chain or cord E connected with and operating the toggle-joint *c*, and passing

through the rings or screw-eyes *f. f.* attached to the stem B to the handle A, substantially as described and for the purposes specified. 15

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of December, 1894.

WILLIAM C. DILLMAN.

Witnesses:

WM. BARRY, Jr.,
WILLIAM H. PITTS.