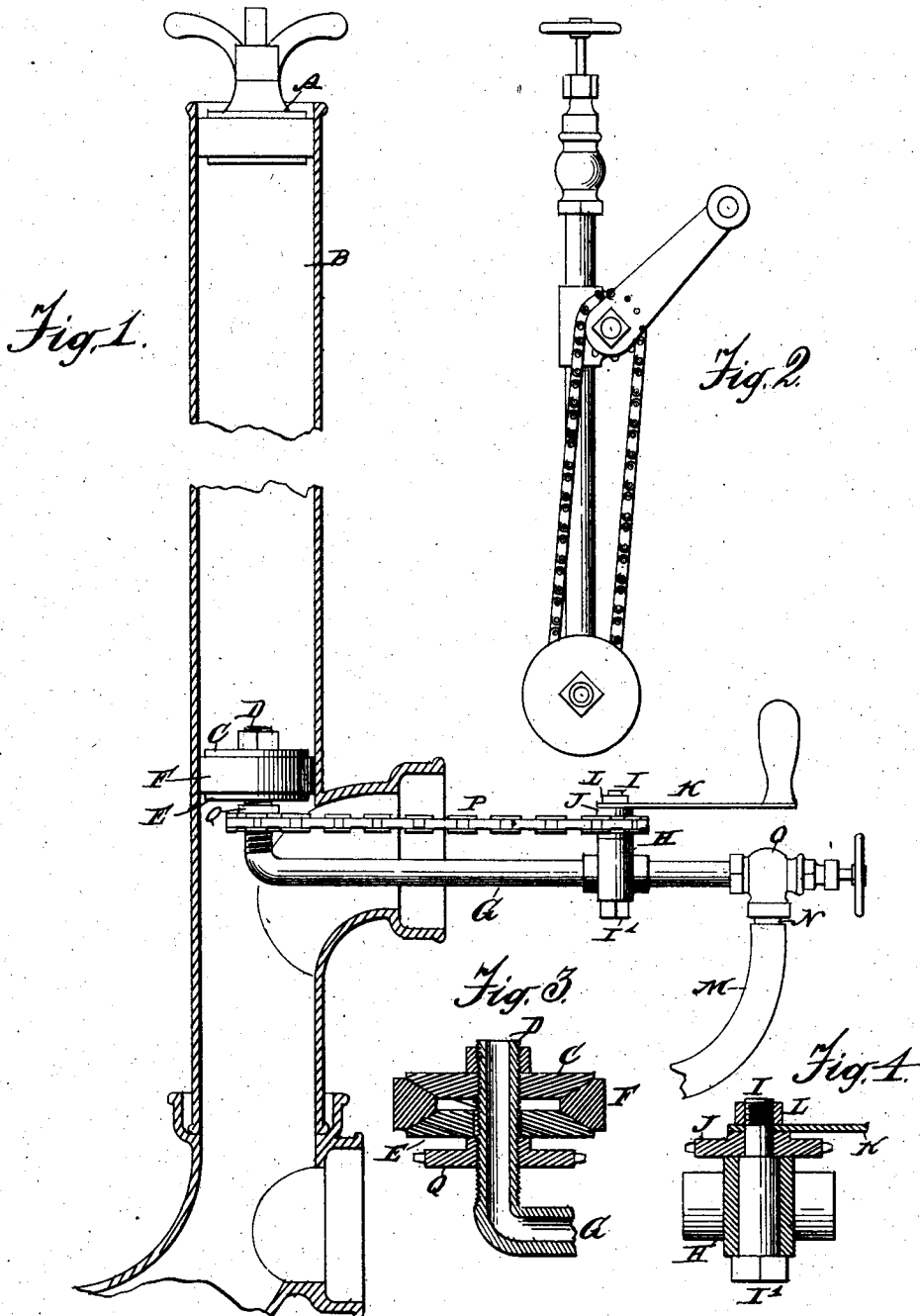


No. 834.393.

PATENTED OCT. 30, 1906.

R. MEISTER.
TESTING PLUG FOR SOIL PIPE.
APPLICATION FILED JAN. 19, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT MEISTER, OF CEDAR RAPIDS, IOWA.

TESTING-PLUG FOR SOIL-PIPE.

No. 834,393.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed January 19, 1906. Serial No. 296,901.

To all whom it may concern:

Be it known that I, ROBERT MEISTER, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Testing-Plugs for Soil-Pipe, of which the following is a specification.

The object of this invention is to provide a convenient device for testing soil-pipe for sanitary purposes, being in its nature an adjustable plug adapted to be quickly applied at a T and communicating by a supply-pipe with the testing means—water, air, smoke, or other medium.

The nature of the invention will clearly appear from the description and claims following, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view illustrating the device as in use. Fig. 2 is a plan view of the same. Fig. 3 is a section through the plug and its connecting-elbow. Fig. 4 is a section through the bearing for one of the sprocket-studs.

In testing soil-pipe to determine whether or not all the joints are tight it is common to close the pipe at the upper end in any suitable way, as by an expanding-plug A, operating on the same principle as the plug to be described hereinafter. Another plug is then inserted through a T near the lower end, and through this latter plug water or air is forced into the pipe. If the testing-machine (not shown) shows an escape of air or water, smoke is next forced into the pipe, and the location of the leak is quickly detected by the escape of smoke. The tool in general use for a testing-plug has an expansible rubber ring, which is expanded by the closing together of adjacent conical disks similar to the construction herein shown, but the closing of the disks is done by means of a ratchet acting on a nut and inside the pipe, with the T projecting still farther toward the operator. In any case the operation is annoyingly slow, and in the constrained position in which the workman is often placed in making the test it is sometimes an irksome task to merely get the plug set preparatory to making the test.

Then when it is so set the pipe may be flushed from above, and the whole must be done over again.

My improved tester admits of the work being done very quickly and easily, and the same will now be described.

In the drawings, B denotes a soil-pipe stopped at the upper end by a simple expanding-plug A. This is in common use and need not be described. The plug for closing the pipe through a T operates on the same principle, but by different mechanism.

C is a conical disk secured to a screw-threaded pipe D, and opposite it is another disk E, adapted to slide freely on said pipe. Between these disks and extending circumferentially beyond them is a rubber ring F, which, as will be evident, expands as the disks are forced toward each other. A short distance from the sliding disk the pipe makes a right angle, and on the outwardly-extending shank G is mounted securely a bearing H for a stud I, to which is secured a sprocket J and a crank K, as by a nut L. The head I' of the stud is preferably squared, so that it may be turned by a wrench, if desired. At the outer end the pipe is provided with suitable means for connecting with a hose M, as by a nipple N, projecting from a globe-valve O. The hose is supposed to be connected with the testing-machine above referred to. The sprocket communicates by a chain P with another sprocket Q, threaded on the pipe-section D.

The operation of the device is very simple. The reduced plug is inserted through the T and placed in proper position. By a few turns of the crank the ring of the plug is expanded to close the pipe air-tight. The testing-machine of whatever nature is then connected by the hose and the test made. If interruptions occur, it is but the work of a moment to remove the plug and again replace it.

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

1. The combination of an expanding test-plug, substantially as described, a compressing sprocket-nut, a threaded pipe to take said sprocket, a right-angled extension of the

pipe, a sprocket mounted thereon, a connecting-chain, and means for turning the outer sprocket.

2. The combination of an expanding test-
5 plug, a threaded pipe-shank for the same, a
compressing sprocket-nut running thereon, a
right-angled extension of the shank, another
sprocket mounted thereon, a chain connect-

ing the sprockets, and a crank to turn the
outer one. 10

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

ROBERT MEISTER.

Witnesses:

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F. J. KUBIČEK.