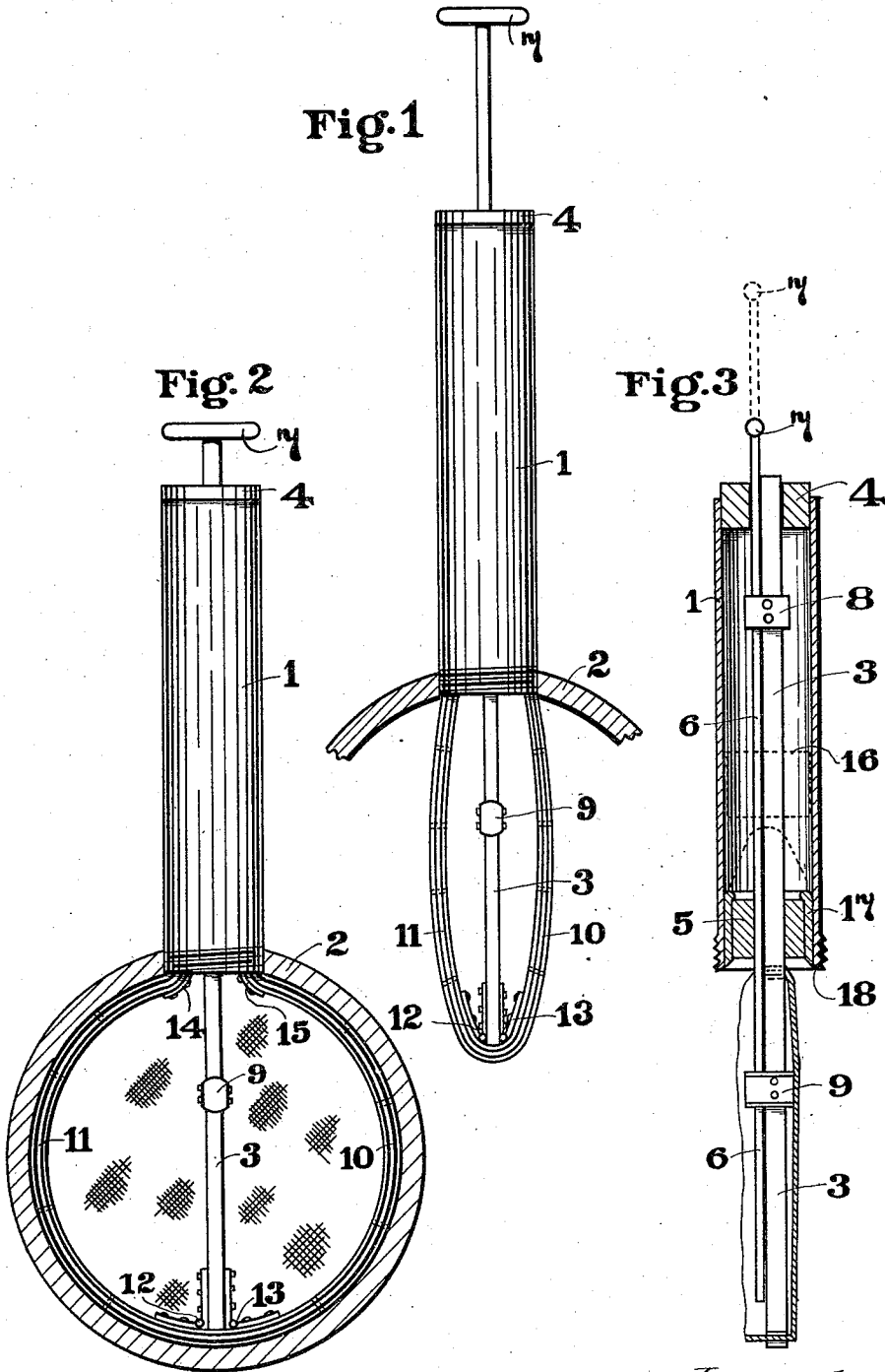


C. TOON.
 MEANS FOR TEMPORARILY CLOSING GAS MAINS AND THE LIKE.
 APPLICATION FILED AUG. 23, 1912.

1,066,343.

Patented July 1, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

CLIFFORD TOON, OF CHRISTCHURCH, NEW ZEALAND.

MEANS FOR TEMPORARILY CLOSING GAS-MAINS AND THE LIKE.

1,066,343.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed August 23, 1912. Serial No. 716,655.

To all whom it may concern:

Be it known that I, CLIFFORD TOON, a subject of the King of Great Britain, residing at 134 Hereford street, Christchurch, in the Dominion of New Zealand, have invented new and useful Improvements in Means for Temporarily Closing Gas-Mains and the Like, of which the following is a specification.

This invention relates to means employed for closing gas mains and the like temporarily, and provides a simple apparatus which effectually prevents escape of gas from mains while opening up for repairs or otherwise.

By means of the invention repairs or connections are carried out without liability of workmen being overcome by gas fumes as frequently occurs with the bladder system at present in vogue.

The invention consists of a standard which is held in a tube by a cap attached to the standard. Thin metal strips or springs are hinged at one end to the bottom of the standard, and at the other end are hinged to a plunger slidable in the standard. Canvas, leather or other similar material is attached to the springs so that when the springs are opened out the said material forms a disk. A rod provided with a handle slides in a hole in the cap and upon being pressed causes the plunger to open out the springs until they take the shape of the section of the main, which is thus effectually closed and may be repaired without risk.

Referring to the drawings:—Figure 1 is a front elevation showing the springs closed. Fig. 2 is a front elevation showing the springs opened. Fig. 3 is a cross sectional elevation.

Referring to the drawings:—The tube 1 is adapted to be screwed into the main 2 which is to be repaired. A standard 3 within the tube 1 is slidable through a cap 4 screwed or otherwise fixed in the tube. A

plunger 5 slidable in the tube 1 and on the standard 3 has an operating rod 6 and handle 7 slidable in guides 8 and 9 fixed to the standard. A cup leather 17 makes an air tight joint between the plunger 5 and the tube 1. Springs 10 and 11 are connected to the bottom of the standard 3 by hinges 12 and 13 respectively, the other ends of the springs being attached by hinges 14 and 15 to the plunger 5.

In operation, the tube 1 is screwed into the main 2 while the plunger 5 is in the position shown by dotted lines 16 in Fig. 3, and so that the handle 7 is at right angles to the line of pipe of the main. The standard, rod 6 and plunger 5 are then depressed until the bottom of the standard rests upon the bottom of the main, and until the springs 10 and 11, are opened out as shown in Fig. 2. The springs 10 and 11 are opened out, when the plunger 5 is at the bottom of the tube 1 in which position they automatically lock the apparatus until pressure is again applied to the handle 7 and the apparatus withdrawn. To ease the pull and allow the canvas to enter the tube readily the lower end has a chamfered edge 18.

I claim:

Apparatus of the kind described comprising a tube adapted to screw into a gas main, a standard slidable in the tube and having its springs hinged to its bottom end, a plunger slidable in the tube and upon the standard and having hinges to which the other end of the springs are attached and a handle for operating the plunger, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLIFFORD TOON.

Witnesses:

PERCY RICHMOND CLIMIE,
CYRIL CARLYN COATES.