

B. FALKE & E. WALTERS.
 LOCKING FAUCET.
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1,040,913.

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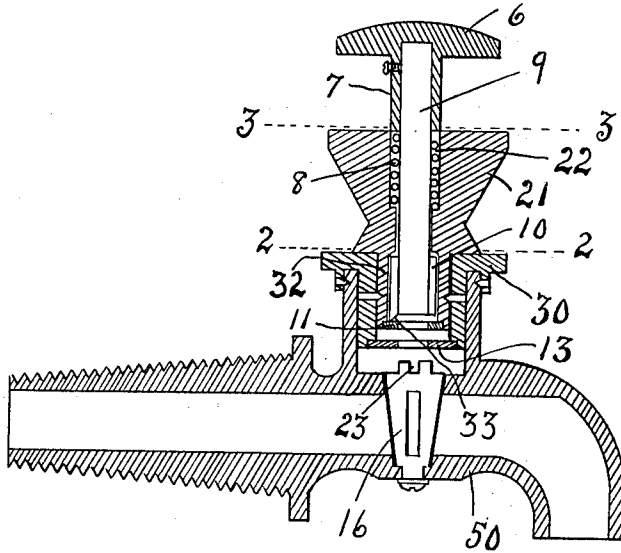
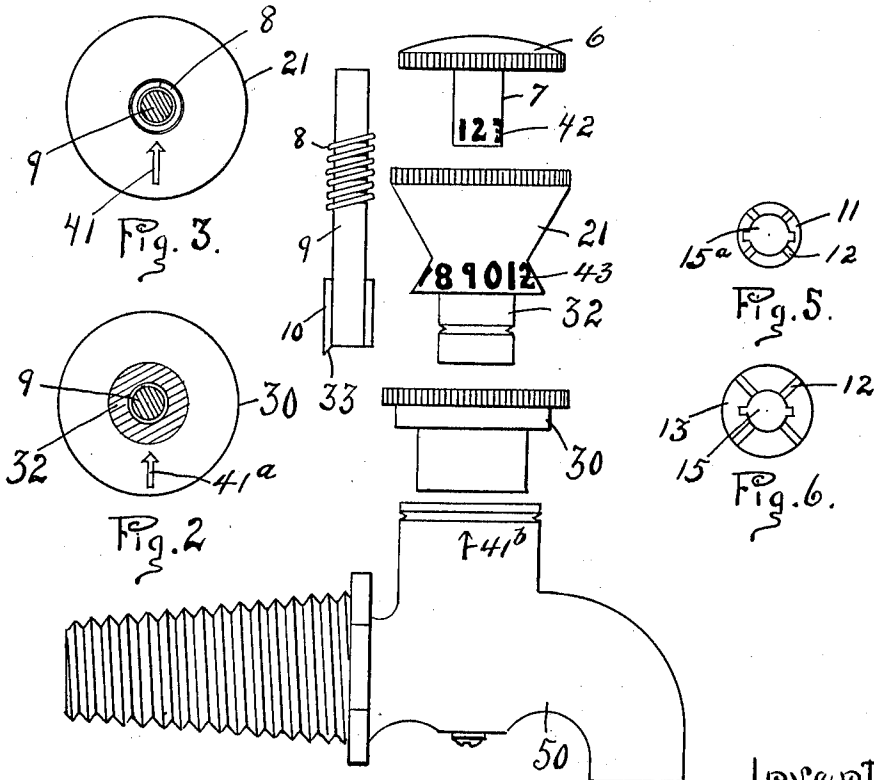


Fig. 1.



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Fig. 4.

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UNITED STATES PATENT OFFICE.

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LOCKING FAUCET.

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To all whom it may concern:

Be it known that we, BRUNO FALKE and EDWARD WALTERS, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Locking Faucets, of which the following is a specification.

This invention relates to locking faucets, and has for its object to provide an improved permutation or combination lock faucet which can only be opened by a person knowing the combination.

The turning plug valve in the faucet is normally disconnected from the operating handle, which handle includes a plunger which has to be turned to properly position the same before it can be advanced to engagement with the plug.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a vertical longitudinal section of the faucet. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a side elevation of the various parts of the faucet, separated. Figs. 5 and 6 are details in plan of rings having openings through which the plunger must pass in order to reach the valve.

Referring specifically to the drawings, the body of the faucet is indicated at 50. This is provided with a turning plug valve 16 having a notch 23 in the top. Mounted in a seat or recess in the top of the valve body is a thimble 30 which is provided at its lower end with a ring 13 having a notched opening 15 through the same, the opening being in line with the plug. The top of the thimble is provided with a series of marks or numbers, one of which corresponds in radial position to the notches in the ring 13. A spool 21 is mounted on top of the thimble, with a tubular extension 32 which fits in the bore of the thimble and at its lower end this extension carries a ring 11 having a notched hole 15^a corresponding in size and shape to the hole 15 in the lower ring. A plunger stem 9 is movable up and down in the bore of the spool and at the opposite sides of its lower end this plunger has ribs 10, the spool being counterbored to allow the plunger and ribs to turn therein. At the lower end of one rib is a finger or projection 33. At its upper end the plunger is provided with a

knob 6 having a sleeve 7 which may be pushed down into a recess or counterbore 22, in the top of the spool, against the tension of a coiled spring 8, located in said counterbore. The upper faces of the rings 11 and 13 are provided with notches 12 into which the finger 33 will engage. The sleeve 7 has a series of marks or numbers 42, and the spool 21 has a series of marks or numbers 43. The upper end of the spool 21 has an arrow 41, and the upper part of the thimble 30, has a similar arrow 41^a. The body 50 has an arrow 41^b.

To operate the lock it is necessary to set the spool and the plunger in such position that the ribs 10 on the plunger will be in line with the notches of the openings 15 and 15^a of the rings, and also set said rings so that their notches will be in alinement, according to the predetermined combination. To do this the thimble 30 is turned until arrow 41^a is in alinement with arrow 41^b, then turn spool 21 until the predetermined number on said spool registers with the arrow 41^a on the thimble 30 so that the notched holes 15 and 15^a will be in line. Then the handle 6 is turned until the predetermined number of the scale 42 registers with the arrow 41 on the spool 21, bringing the ribs 10 in alinement with the notches of the holes 15 and 15^a. Then the plunger may be pushed down, and its lower end will pass through the holes in the rings until the finger 33 enters the notch 23 in the valve plug, after which the plug may be turned, to open the valve, by turning the handle 6. When the pressure on the handle is released, the spring 8 lifts the same to the original position, as shown in Fig. 1, after which the handle and spool may be turned to destroy the combination. The notches 12 are false devices or baffles, since the finger 33 may engage therein, and if the handle is then turned the spool will also be turned, or if by tampering a person should succeed in getting the plunger through the upper ring 11 the finger 33 will catch in the notches 12 of the lower ring and thus prevent the plunger being turned to proper position to register the ribs 10 with the notches of the hole 15 in the lower ring. It will be noted that in order to turn the plunger 9 and the spool 21 with respect to each other the plunger must be raised slightly, in order to disengage the finger 33 from the notches 12.

What we claim as new is:—

1. The combination with a valve body and a turning valve, of an operating stem movable to engagement with said valve, and a locking mechanism mounted on the valve body and having a member located between the inner end of the stem and the valve body and adapted to prevent such movement and engagement, when in locked condition.
2. The combination with a valve body and a turning valve therein, of a stem normally detached from the valve and movable axially to engagement at its end therewith, and a lock on the body, having a rotary member located between the inner end of the stem and the valve and movable to different positions to either permit or prevent such axial movement of the stem.
3. The combination with a valve body and a turning valve therein, of a thimble rotatable in the valve body, a cylinder rotatable in the thimble, and a plunger stem rotatable within the cylinder, and movable axially therein to engagement with the valve, said cylinder and thimble having corresponding recesses and the stem having projections adapted to lock said stem against said axial movement, and also adapted to be registered with said recesses by proper relative rotation of the cylinder, thimble and stem to permit said axial movement and engagement.

4. The combination with a valve body and a turning valve therein, of a rotary stem movable axially to and from engagement with said valve, and a permutation lock mounted on the valve body and having a member rotatable around the stem, and also having a plurality of rotatable parts normally located between the inner end of the stem and the valve and preventing engagement of the stem and valve and adapted to be turned to set position to permit such engagement.

5. The combination with a valve body and a turning valve therein, of a stem movable axially to and from engagement with said valve, and rotatable to turn the same, the inner end of said stem being non circular, and a spool mounted on the valve body and rotatable around the stem, said spool having at its inner end a non-circular recess corresponding to the inner end of the stem and adapted to permit the said end to pass through said recess when the spool is turned to proper position.

In testimony whereof, we do affix our signatures in presence of two witnesses.

BRUNO FALKE.
EDWARD WALTERS.

Witnesses:

JOHN A. BOMMHARDT,
ROBERT JONES.