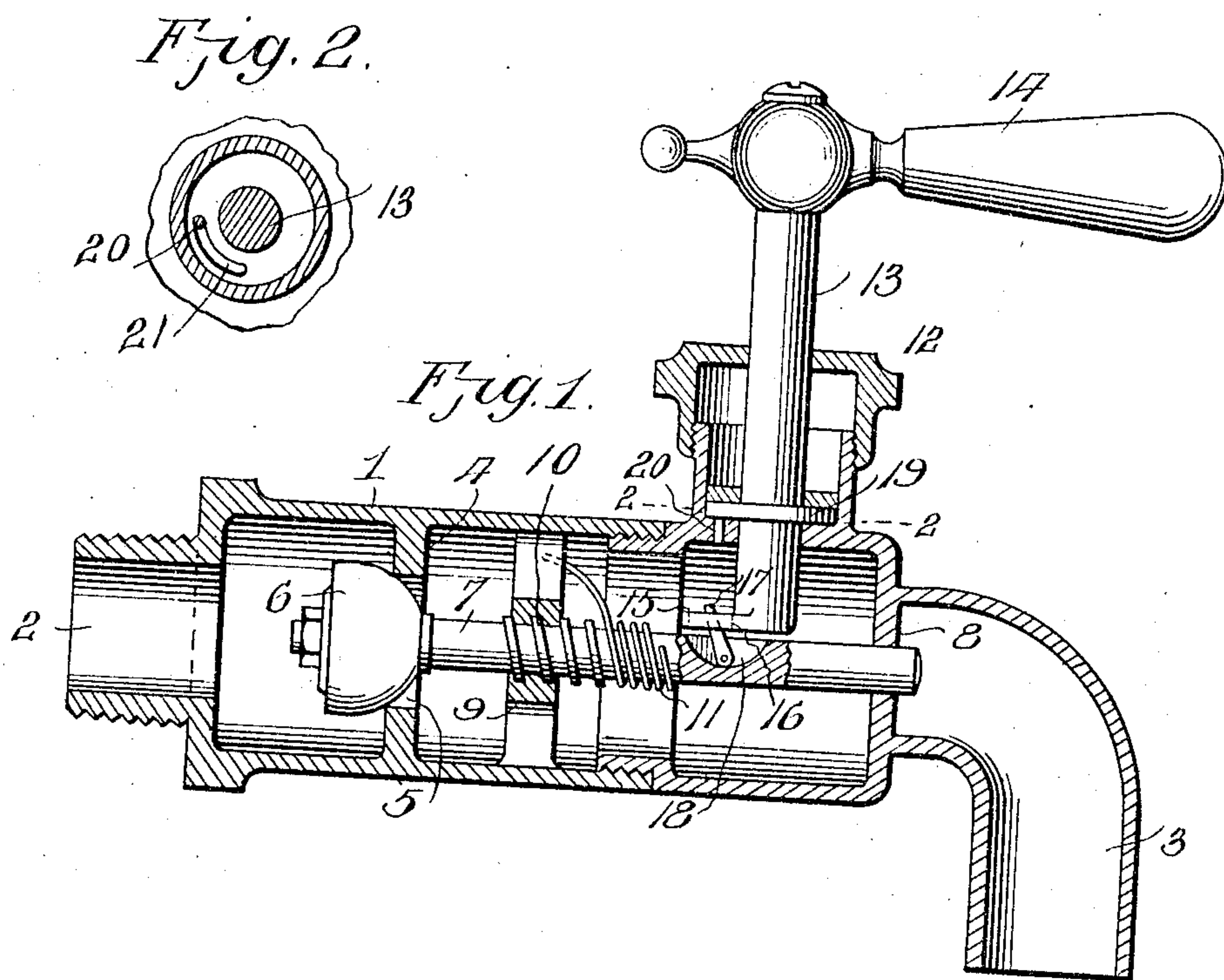


No. 892,821.

PATENTED JULY 7, 1908.

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VALVE.

APPLICATION FILED FEB. 1, 1907.



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UNITED STATES PATENT OFFICE.

FRANK FOWLER, OF LOUISVILLE, KENTUCKY.

VALVE.

No. 892,821.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed February 1, 1907. Serial No. 355,283.

To all whom it may concern:

Be it known that I, FRANK FOWLER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates to valves of the type embodying a rotary valve stem to be turned in the operation of opening and closing the valve and has for its object to provide a comparatively simple, inexpensive device of this character wherein the stem may be readily and positively rotated in one direction for moving the valve to open position and one in which the stem will be automatically turned in the other direction for closing the valve and the valve held securely in closed position.

With these and other objects in view, the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a central longitudinal section through a valve casing equipped with a valve operating mechanism embodying the invention. Fig. 2 is a detail sectional view taken on the line 2—2 of Fig. 1.

Referring to the drawings, 1 designates a valve casing having an inlet port 2 and a discharge port 3, there being arranged in the casing between said ports a web or partition 4 provided with an opening 5 normally closed by means of a valve 6, the stem 7 of which is rotatively sustained by bearings 8 and 9, and is provided with screw threads 10 engaged with similar threads on the bearing 9 to adapt the valve for movement in open or closed position during rotation in the proper direction, while coiled upon the stem is an operating spring 11 having one of its ends engaged with the stem and its other end engaged with the bearing 9 or some other fixed part of the casing and designed for holding the stem in position with the valve closed.

Extended into the casing through a bearing box 12 at right angles to the valve stem is a rotary operating member or rod 13 provided at its outer end with an operating handle 14 and at its inner end with a crank arm

15 having a slot 16 which receives a finger 17 pivoted in a recess 18 provided in the stem 7, while fixed on the rod 13 at a point between its ends is a disk-like head 19 adapted to bear on the bottom of the box 12 and having a projecting pin or stud 20 arranged to work in an arcuate slot 21 formed in the bottom of the box and with the ends of which the pin contacts to limit the movement of the rod 13.

In practice and in order to open the valve, the handle 14 is grasped and the rod 13 rotated from right to left thereby, through engagement of the crank arm 15 with the finger 17, rotating the stem 7 in the proper direction for opening the valve, it being understood that during rotation of the stem, the same is moved longitudinally and rearwardly through the action of the threads 10 while at the same time the spring 11 is partly unwound. When the handle is released, the spring, in rewinding, causes a reverse rotation of the stem 7, thereby moving the valve to closed position. The finger 17 being pivoted in the recess 18 of the valve stem will engage the slot 16 in the crank arm 17 without danger of binding when the rod 13 is turned to operate the valve and the operation of the latter is greatly facilitated and improved.

Having thus described the invention, what I claim is:—

1. In a valve of the character described comprising a casing having at one end an inlet, and at the opposite end an outlet port and an intermediate bearing box, bearings within the casing, a valve carrying stem supported in said bearings for rotary and longitudinal movement and having threaded engagement with one of the bearings, a finger pivoted upon the valve stem and an operating member supported for rotation in the bearing box at right angles to the valve stem and having a slotted crank arm engaging the pivoted finger.

2. In a valve of the character described comprising a casing having at one end an inlet, and at the opposite end an outlet port and an intermediate bearing box, bearings within the casing, a valve-carrying stem supported in said bearings for rotary and longitudinal movement and having threaded

engagement with one of the bearings, a finger
pivoted upon the valve stem, an operating
member supported for rotation in the bear-
ing box at right angles to the valve stem and
5 having a slotted crank arm engaging the
pivoted finger, and a retracting spring for the
valve stem.

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

FRANK FOWLER.

Witnesses:

I. C. COOGLE,
C. W. COOGLE.