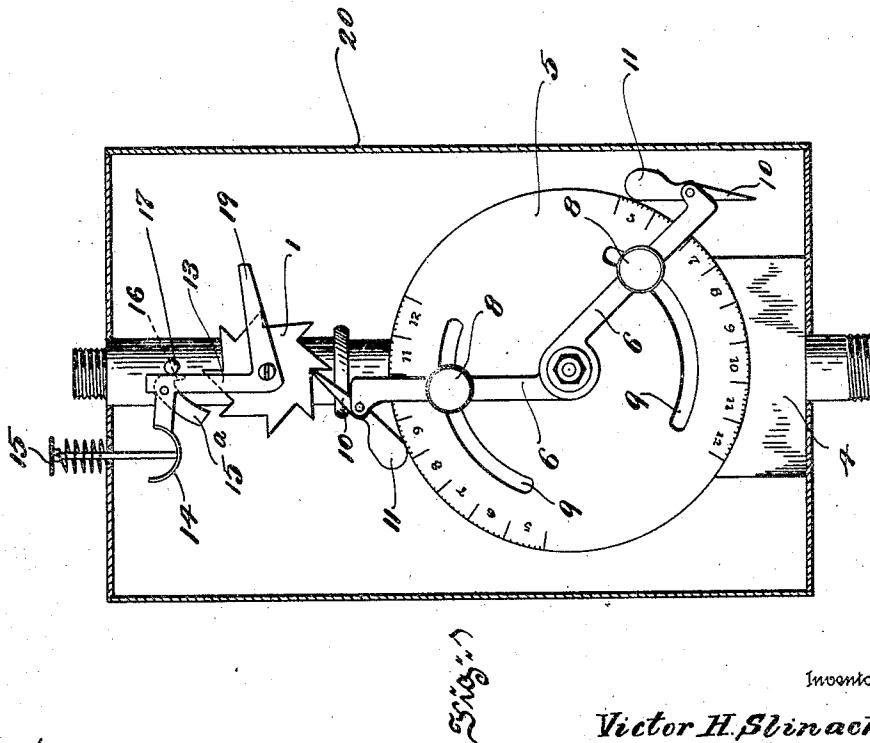
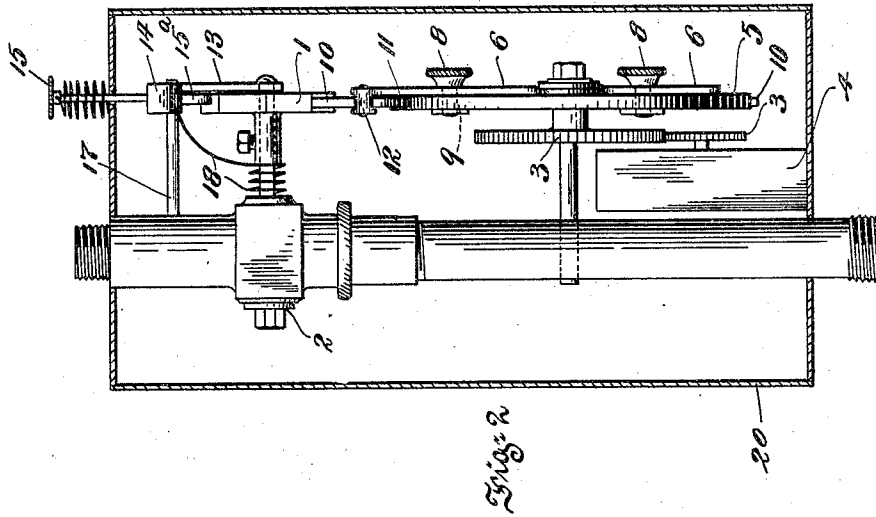


V. H. SLINACK.
 TIME MECHANISM FOR OPERATING GAS AND OTHER VALVES.
 APPLICATION FILED AUG. 1, 1907.

944,988

Patented Dec. 28, 1909.



Witnesses
[Signature]
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UNITED STATES PATENT OFFICE.

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TIME MECHANISM FOR OPERATING GAS AND OTHER VALVES.

944,988.

Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed August 1, 1907. Serial No. 386,527.

To all whom it may concern:

Be it known that I, VICTOR H. SLINACK, a citizen of the United States, and resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Time Mechanism for Operating Gas and other Valves, of which the following is a specification.

The principal object of the present invention is to provide in connection with clock driven mechanism for opening and closing a valve, manual mechanism by which the valve can be opened and closed independent of the clock mechanism and whether the same be going or be at rest.

Another object of the invention is to provide clock controlled valve working mechanism which is capable of practical application in that the valve, when necessary, can be operated independently of the clock mechanism.

In the accompanying drawings in which I have illustrated what I now consider the best embodiment of my invention Figure 1, is a front view partly in section, and Fig. 2, is a side view partly in section.

In the drawings 1, is a ratchet wheel connected with the spindle 2 of a plug valve. This ratchet wheel may be turned at all times manually and it may also be turned at proper intervals by clock mechanism.

3, is a clock-work train of wheels driven as by means of a spring 4 contained in the housing. The clock work turns a dial 5 upon which are adjustably arranged one or more arms. In the present instance, two arms are shown and each is independently adjustable. Each of these arms 6, is movably connected with the center of the dial 5 and is provided with a binding screw 8, the shank of which is afforded a range of motion in a slot 9 in the disk 5. The disk is shown as provided with a scale by means of which the arms may be adjusted and when adjusted they are clamped to place by their binding screws 8. At the end of each arm there is a pivotal pawl 10, the driving end of which is afforded a range of motion toward and away from the rim of the dial 5. As shown the tail 11, of the pawl 10 is arranged to come to a bearing on the rim of the dial 5, as shown at the upper portion of Fig. 1. When in this position the pawl is

rigid so far as turning the ratchet wheel 1 in counter-clock-wise direction is concerned, but the driving end or point of the pawl can turn down toward the rim of the dial for a purpose which will be presently described and this motion is limited by the bent portion 12, of the arm to which the pawl is pivoted. There is a bell-crank lever pivoted concentrically with the ratchet wheel 1, one arm 13, of this lever is provided with means by which the lever is turned and these means are shown to comprise a curved plate 14, upon which bears the end of a spring retracted push button 15. This arm 13 is also provided with a pivotal pawl 15^a having a tail 16 which coöperates with a stud or pin 17.

18, is a spring which tends to bring the bell-crank lever into the position shown in Fig. 1, so that the tail 16, of the pawl 15^a is held up against the pin 17 and thus keeps the point of the pawl 15^a clear of the teeth of the ratchet wheel 1. The arm 10, of the bell-crank serves as a stop for limiting the throw of the bell-crank and of the pawl 15^a, which it carries.

It will be understood that when the arm 13, is turned the tail 16 of the pawl clears the pin 17 and in that way the point of the working end of the pawl is permitted to fall by gravity into engagement with the teeth of the ratchet wheel 1. In use the clock work drives the dial 5, which carries the arms and their pivotal pawls 10, the latter engage the teeth of the ratchet wheel 1 and thus turn the plug of the valve at appropriate intervals.

It is understood by those skilled in the art that the turning of the plug may be used to extinguish the gas and also to light it, in the latter case the well known pilot light may be availed of. If, for any reason and at any time, it may be desired to turn the plug manually, this can be accomplished by depressing the push button or otherwise turning the arm 13, so that its pawl 15^a will drive the ratchet wheel 1 and thus turn the plug. This can be done even when one of the pawls 10 is in engagement with the ratchet wheel and even if the clock should have stopped in that position, because, referring to Fig. 1, if the ratchet wheel be turned by means of the pawl 15^a the point or working end of the pawl 10 will be turned down

toward the rim of the dial or disk 5 and in that way permit the ratchet wheel to turn. When the push button is arranged outside of the housing or box 20, which contains the apparatus it is obvious that the plug can be worked manually without opening or in any way disturbing the box or clock working. This is advantageous because it is often necessary or desirable to test the burners or lights.

The fact that the spindle of the push button extends through the casing or housing 20 does not prevent the latter from being made sufficiently tight against the ingress of dust and other undesirable things, such as would interfere with the mechanism.

What I claim is:

1. Mechanism for automatically operating valves which comprise the combination of a rotary gas valve, a valve operating ratchet wheel, a clock driven member provided with a pawl adapted to normally drive the ratchet wheel and having a range of motion in respect to said member sufficient for permitting advancing motion of the ratchet wheel, and a manually operated member provided with a pawl adapted to drive the ratchet wheel, whereby said clock driven member remains at rest and the first mentioned pawl is moved in respect to it when the wheel is driven by the last mentioned pawl, substantially as described.

2. Mechanism for automatically operating valves which comprises the combination of

a plug valve provided with a ratchet wheel, a disk provided with an adjustable arm, clock-work for driving the disk, a pawl adapted to drive the ratchet wheel and pivoted to the arm and having its tail adapted to abut on the disk, a movable arm, manual means for turning the last mentioned arm, and a pawl carried by the last mentioned arm and adapted to coöperate with the ratchet wheel, substantially as described.

3. In mechanism for automatically operating valves the combination of a plug valve provided with a ratchet wheel and fixed stop, a bell crank lever the arms of which are arranged to abut upon said stop, a pawl pivoted to one of said arms and having its tail arranged to collide with said stop to position the pawl clear of the ratchet wheel, means for normally positioning the bell crank lever to lift the pawl clear of the ratchet wheel, a valve operating ratchet wheel, and a clock driven member provided with a pawl adapted to normally drive the ratchet wheel and having a range of motion in respect to said member sufficient for permitting advancing motion of the ratchet wheel, substantially as described.

In testimony whereof I have hereunto signed my name.

VICTOR H. SLINACK.

Witnesses:

WM. J. JACKSON,
FRANK E. FRENCH.