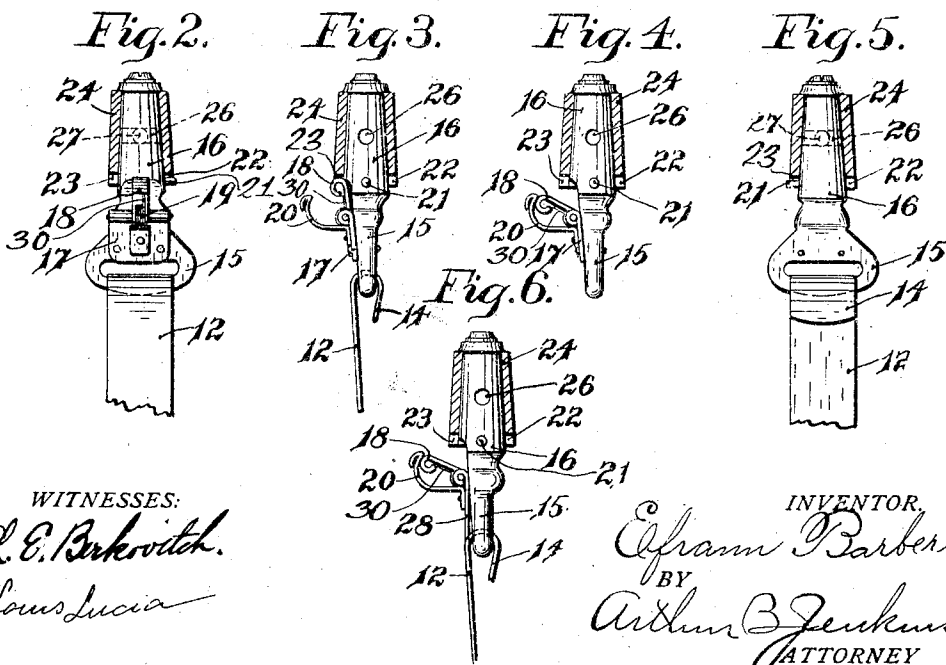
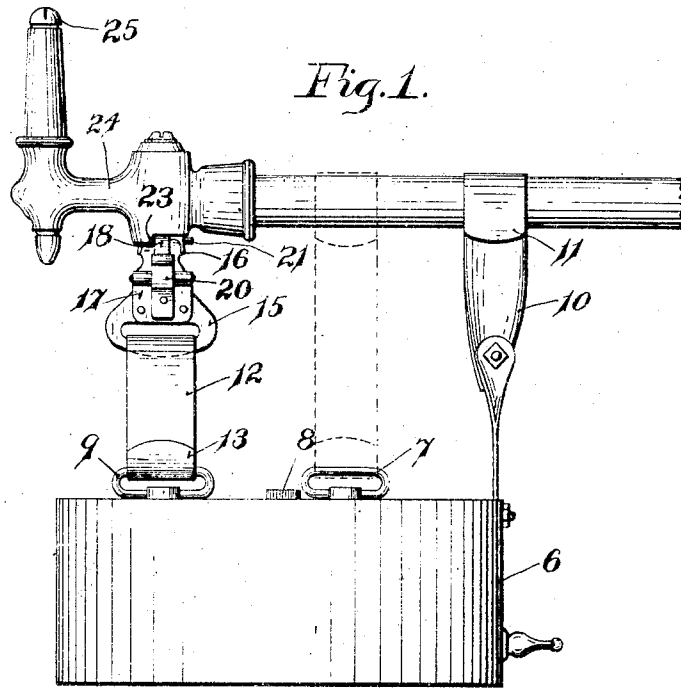


E. BARBER.
 TIME ACTUATING DEVICE FOR GAS COCKS OR THE LIKE.
 APPLICATION FILED APR. 21, 1910.

992,537.

Patented May 16, 1911.



UNITED STATES PATENT OFFICE.

EPhRAIM BARBER, OF HARTFORD, CONNECTICUT.

TIME ACTUATING DEVICE FOR GAS-COCKS OR THE LIKE.

992,537.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed April 21, 1910. Serial No. 556,849.

To all whom it may concern:

Be it known that I, EPhRAIM BARBER, a subject of the Emperor of Russia, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Time Actuating Device for Gas-Cocks or the Like, of which the following is a specification.

My invention relates to the class of devices for automatically operating the plug of a gas valve to turn on or shut off the flow of gas, and the object of the invention is to provide a simple and effective arrangement of mechanism for accomplishing this result.

A form of device in the use of which the objects above set out may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a view of a gas pipe with a burner at the end and my improved actuating device applied thereto. Fig. 2 is a detail view showing the arrangement of parts to turn on the flow of gas, the valve being closed and the catch being broken off. Fig. 3 is a like view showing the valve open, the valve being in position to permit flow of gas to the tip. Fig. 4 is a detail view showing the arrangement of the mechanism to turn off the gas, the valve being open. Fig. 5 is a like view showing the valve closed. Fig. 6 is a detail view showing a modified form of construction.

In the accompanying drawings the numeral 6 denotes a clock of ordinary form and construction having the usual winding mechanism including a winding key 7, a setting knob 8 and alarm mechanism of ordinary form and construction including an alarm winding key 9. This clock mechanism being of ordinary construction further and detailed description is deemed unnecessary herein. The alarm may be wound in the usual way by turning the key 9 and may be set to operate at any predetermined time, in the operation the key 9 turning in the opposite direction from that in which it was turned to wind the alarm.

A strap 10 secured to the clock and having a hook 11 may be employed to partially suspend the clock in proper position for operation, and an operating strap 12 having a hook 13 to engage the key 9 and another hook 14 to engage the key 15 of

the gas valve serves as a balance of the support for the clock. Any means of support for the clock, however, may be employed, and the connection between the alarm key 9 and the valve key 15 may be of any suitable form and construction so long as it will communicate rotation of the key 9 to the valve key 15.

In addition to the stop pin regularly used in devices of the kind herein shown a check to control the movement of the plug 16 is employed and this may be supported in any convenient manner to effect the result herein described, in one form of construction this including a bracket 17 secured to the valve key 15 and having a stop 18 yieldingly secured thereto. In the preferred form of construction and as shown herein this stop is yieldingly attached to the bracket by means of a pivot and is adapted to rest against the outer surface of the plug 16, a coiled spring 19 having a finger 20 thrusting against the stop being employed to hold the stop in this position. A catch 20 is also secured to the bracket and has its end arranged to engage and hold the stop 18 in a position away from the plug.

The plug 16 is of ordinary form and construction including a stop pin 21 engaging shoulders 22, 23 on the valve body 24. In this well-known form of construction of the valve the passage therethrough is closed when the pin is against either of the shoulders 22, 23, and the passage is open to permit flow of gas to the tip 25 when the pin is in a position midway between the stops.

In the operation of the device, it being assumed that the gas is to be turned on at a certain time by the operation of the device and that the alarm key 9 is turned to the left to wind the alarm mechanism, and that said key will turn to the right as said alarm mechanism operates, the valve plug will occupy the position shown in Fig. 2 with the stop pin 21 resting against the shoulder 22 in which position of the plug the passage 26 through the plug is in a position to cut off flow of gas through the passage 27. The clock being suspended as shown, the stop 18 is placed in the position shown in Figs. 1, 2 and 3 of the drawings against the side of the plug 16. As the alarm operates to turn the plug (which is turned to the left

with respect to the valve while the alarm key 9 although turning in the same direction is turned to the right, with respect to the clock case) the passage 27 will be opened to flow of gas, and the stop 18 being moved against the shoulder 23 the plug will be arrested with the pin 21 in its mid-position and with the passage 27 thus opened and the gas turned on.

13 It being assumed that the gas is burning and is to be turned off at a certain time the parts will be placed in the position shown in Fig. 4, in which the stop 18 is swung backward into engagement with the catch 20, which holds it in this position, the pin being in the position shown in Fig. 3. The clock having been arranged as before described, as the alarm operates the gas key will be turned in the same direction as before, but the stop 18 having been swung backward so that it will not engage the shoulder 23 the gas plug is turned to its closed position, being arrested in its movement by the pin 21 striking the shoulder 23 in the regular manner.

In Fig. 6 of the drawings I have shown a modified form of the invention, in which the bracket 28 is secured directly to the strap 12, so that the entire attachment for operating the plug exists separate and apart from both the plug and the clock.

I also contemplate a structure in which the strap 10 may be of requisite length to hook through the loop 7 in the same manner that the strap 12 hooks through the loop 9, as indicated in dotted lines in Fig. 1, so that the invention contemplates a structure in which the gas valve or clock need not be changed in any respect whatsoever, my improved structure being ready for instantaneous attachment to a gas jet and clock of ordinary construction.

Other changes are contemplated by me as within the spirit and intent of the invention, and I do not therefore limit my invention and the scope of the following claims to the foregoing illustration and description embodying the preferred form of the invention.

50 I claim—

1. A controller member movable in opposite directions from an open position to closed positions to control movement of an active agent, means for stopping movement of the controller member when it reaches a closed position, a time mechanism including a movable part, means for connecting said member and part to move the former in the operation of the latter, and means pivotally mounted to have movement on its pivot transversely to the path of movement of the means for stopping motion of the controller member and to stop the latter when it reaches its open position.

65 2. A gas cock including a valve plug, a

time mechanism including a rotating member, means for connecting said plug and rotating member, a pivoted stop mounted to rotate with said members and to limit the degree of rotation thereof, and means for supporting the time mechanism.

3. A gas cock including a rotatable valve plug and a stop shoulder therefor, a clock including a rotating part, means for connecting said plug and part, a pivoted stop mounted to rotate with said parts and arranged to engage said shoulder to limit the degree of movement of the plug, and means for supporting said clock.

4. A gas cock including a rotating valve plug and a stop shoulder therefor, a clock having a rotating member, means for connecting said plug and member, a bracket mounted to rotate with said plug and member, a catch pivotally supported on said bracket and arranged to engage said stop shoulder to limit the rotary movement thereof, and means for supporting the clock.

5. A gas cock including a rotating plug, a clock including a rotating member, means for connecting said plug and member, a pivoted stop movable with said plug and member and arranged to limit the rotary movement thereof, and means for holding said stop in an inoperative position.

6. A gas cock including a rotatable plug and a stop shoulder therefor, a clock including a rotating member, means for connecting said plug and member, a stop secured to rotate with said members and arranged to engage with said stop shoulder to limit the rotary movement of said plug, means for holding said stop in an inoperative position, and means for supporting the clock.

7. A gas cock including a rotating valve plug and a stop shoulder therefor, a clock including a rotatable member, a strap connecting said plug and member, a bracket secured to said strap, and a pivoted stop secured to said bracket and arranged to engage said stop shoulder to limit the rotating movement of said plug.

8. A gas cock including a rotating valve plug and a stop shoulder therefor, a clock including a rotating member, a connection between said parts, a bracket secured to said connection, a pivoted stop secured to said bracket and arranged to engage said stop shoulder to limit the rotating movement of the plug, and means for holding said stop in its inoperative position.

9. A controller member rotatable in opposite directions from an open position to closed positions to prevent an active agent from exerting its function, a time mechanism including a movable part, means for connecting said member and part to rotate the former in the operation of the latter, means to arrest said rotatable movement when the parts reach an open position, and

means to arrest movement of said member in a continued rotation in the same direction when the parts reach a closed position.

10. A controller member movable to prevent and to permit an active agent to exert its function, a time mechanism including a movable part, means for connecting said member and part to move the former in the

operation of the latter, means for arresting the movement of said parts, and a pivoted member arranged to be placed in position to arrest said movement.

EFRAIM BARBER.

Witnesses:

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